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## ABSTRACT

A study sought to determine (1) whether a television program designed to enhance personal, social, and emotional development can have positive effects on children's behavior and, (2) what elements in a child's environment produce the greatest positive effects. Two components of the environment were studied: (1) training of the adult care-givers to implement materials and, (2) concepts related to the programs and arrangements of the physical environment to increase the likelihood that the child will use material from the program in his everyday behavior. The television program called Mr. Rogers' Neighborhood was dubbed to 16mm film; the subjects were children enrolled in the Head Start program. Twenty films were shown in each classroom during the eight-week experimental period. Play materials relevant to prosocial television were designed to provide cues; books, games, and records devoid of prosocial context were chosen as irrelevant material. Prosocial television produced few behavioral differences from the neutral treatment, but the effects of prosocial television accompanied by relevant play materials varied with classroom structure. The study indicates the usefulness of prosocial television and related curriculum materials in day care and educational programs for young children of the economically disadvantaged. Fifteen statistical tables detail the material used and measurement figures. Suggested neutral materials, film content, and observation of behavior are appended. (Author/DS)

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A Naturalistic Study of the Effects  
of Prosocial Television and Environmental  
Variables on the Behavior of Young Children

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The Pennsylvania State University

July 1975

Final Report to the Office of Child  
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The study described here deals with a twofold problem: to determine whether a television program designed to enhance personal, social and emotional development can have positive effects on children's behavior and to determine what elements in the child's environment may combine with exposure to such a program to produce the greatest positive effects. Two components of the environment were studied: training of the adult caregivers to implement materials and concepts related to the programs and arrangement of the physical environment to increase the likelihood that the child will use material from the program in his everyday behavior. The program selected for study was "Misterogers' Neighborhood." The group settings were early childhood education programs for low income children.

### Background Literature

The theory and research on observational learning (Bandura 1969) provide one conceptual basis for the selection of variables studied in evaluating the effects of television. As one applies this theory to complex natural settings however many questions arise that cannot be answered from the laboratory findings alone. For example, children imitate altruism helping, delay of gratification, and self-imposed standards of performance when exposed to a single model (Hoffman, 1970, Staub, 1971a). These studies do not indicate how children will respond to more complex television programs with multiple models. Nor do they address questions such as how much children generalize material observed in one situation to other settings, how much they go beyond imitation to engaging in behavior that is related but different from that observed or how durable the effects of particular observation experiences are.

An earlier study by the present investigators reflects our concern with generating knowledge that bridges the gap between psychological theory and laboratory research on one hand and social application on the other. The effects of Misterogers' Neighborhood on the naturalistic behavior of preschool children in a nursery school setting were examined (Friedrich & Stein, 1973 Stein & Friedrich, 1972). Children who viewed Misterogers were compared to those shown miscellaneous children's films (the 'neutral' group) and to those shown aggressive cartoons. Observations were conducted during a baseline period before the television programs were shown, during a four-week period in which programs were shown three times a week; and for two weeks following the programs. Children who saw Misterogers showed higher levels of self controlling and achievement behavior (task persistence) than those in the other two groups. For children from lower social status families, exposure to Misterogers was also associated with increased prosocial interpersonal behavior (cooperation, nurturance, and verbalization of feeling) in comparison with other treatment groups. Higher social status children did not show positive effects on interpersonal behavior.

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Subsequently, other researchers have found positive effects on measures of naturalistic behavior associated with viewing Misterogers' Neighborhood. With a middle class preschool sample Shirley (1974) found increased sharing and decreased aggression, but there were no changes in cooperation or helping. Lower class preschool children showed increases in imaginative play particularly when an adult was present during viewing to focus attention on relevant aspects of the programs (Singer & Singer, 1974).

Exploration of the environmental variables that enhance the effects of viewing prosocial television was the focus of two recent laboratory studies conducted by the present investigators. (First year of the current research project): The effects of physical cues from the television programs and rehearsal of program themes with the aid and direction of an adult were investigated.

Both studies followed parallel formats though they dealt with different areas of behavior and different types of environmental variables. In each, groups of children were shown four Misterogers' Neighborhood programs over the course of four consecutive days. Control groups saw neutral films which had been transferred to videotapes. Acquisition and/or performance was measured during the week following the end of viewing. Thus, these studies were considerably more extensive than the usual one-session laboratory study in both number of exposures and in the time elapsing between viewing and measurement, but they were more limited than the previous field study. (Stein & Friedrich, in press p. 13).

In the first study, the television programs selected were focused on persistence and autonomy in learning activities.

The effects of these programs on three types of self-regulation: persistence, reflectivity, and motor inhibition were investigated. A number of experimental studies have demonstrated imitation of reflective conceptual tempo (Debus, 1970; Denny, 1972; Ridberg, Parke, & Herherington, 1971). As the tenor of the 'Mr. Rogers' Neighborhood' programs is slow, calm, and gentle, they may provide a generalized presentation of reflectivity. In addition, the particular programs shown emphasized the need to stop and consider a situation carefully before attempting another rocket launch. Thus increases were expected in children's willingness and ability to slow down, delay responding, and consider their reactions carefully as well as increases in task persistence." (Stein & Friedrich, in press p. 14).

The effects of cues from the prosocial television programs on persistence were also investigated.

Physical cues that are similar to an observed stimulus should increase the likelihood of imitation. Toys, pictures, records, costumes, and other objects denoting televised characters or events may serve as eliciting stimuli for observed responses and/or as instigators for rehearsal through play activities. Direct laboratory tests of this hypothesis with children are not available, but there is evidence in Berkowitz' research that adults display more imitative aggression when the name of the target person is similar to a character in a violent film than when it is dissimilar (Berkowitz, 1970). Situational cues may be particularly important in facilitating generalization to natural settings for young children because of the situation-specificity of much social behavior (Mischel, 1968). Cues in this situation were conceptualized primarily as eliciting stimuli for previously learned behavior; there was little opportunity for extended rehearsal of televised content. (Stein & Friedrich, in press, p. 14).

Two persistence measures were employed: a puzzle which was impossible to finish, and a carnival game in which failure and partial success occurred in a predetermined random order. Disabusement was carried out by permitting success on both tasks. Cues-- pictures and music from the prosocial programs-- were manipulated on each task.

Measures of reflection-impulsivity and motor inhibition were administered immediately following the second persistence task. These included the Kansas Reflection-Impulsivity Scale for Preschoolers (Wright, 1971) Draw-a-Line Slowly and Walk-a-Line Slowly (Maccoby, Dowley, Hagen & Degerman, 1965). Details of the procedures and results appear in Stein, Friedrich, and Tahsler (1973).

Differences between the prosocial and neutral television conditions occurred only for girls. There were no effects for boys.

Girls in the prosocial television condition had significantly longer response times on both motor inhibition measures than girls in the neutral condition and than boys in both conditions. They also tended to have longer latencies and fewer errors on the KRISP, but the differences were not significant (Stein & Friedrich, in press).

Girls' persistence scores depended on both television viewing and order of administration of the persistence tasks. When the task involving partial success and failure came first (carnival game), females in the prosocial condition had the longest persistence and highest number of trials of any subgroup on both persistence tasks. However, when the puzzle task which was characterized by success followed by continuous failure came first, these subjects had the lowest persistence times and number of trials of any subgroup on both tasks.

The messages concerning persistence that are conveyed in the prosocial programs appear to be staying with a task is most fruitful if one stops to get more information or to try a new approach after a failure and doing something independently is more satisfying than having it done for you. Girls who saw the prosocial programs and incorporated this message may have responded with greater persistence when initially confronted with the carnival game because that task provided some success, new approaches appeared to be possible, and the final success was achieved independently. Positive experience with this task may have carried over to the second task. When girls who were sensitized to these messages received the puzzle first, they may have been particularly discouraged by the continuous failure, the apparent absence of new approaches, and the need for experimenter aid. Again, their discouragement may have influenced their response to the second task. In essence it is possible that the prosocial television content led to quite different reactions to different stimulus situations. The proposal that girls in both orders of administration were responding to the same television messages is supported by the fact that both groups manifested the predicted changes on the motor inhibition tasks, and to some extent, on the KRISP. These tasks did not permit voluntary termination, so children who may have been discouraged by early failure had no choice but to attempt the latter tasks (Stein & Friedrich, in press, p. 17).

The limited effects of the television programs on persistence in this study are inconsistent with the clear-cut changes in persistence for both sexes in the first study.

Three of the four television programs were identical in the two studies. One reason for the discrepancy may be that the quality of persistence that occurred in a natural setting was different from the experimental tasks employed. Much of the persistent behavior scored in natural observations did not involve frustration or failure; children were simply concentrating on a task such as painting, building, or motor activity. Many naturally occurring "tasks" have no clearly defined goal, so success and failure cannot be so easily recognized by the child as in the experimental tasks used. Finally, in the nursery school children choose their activities. Experimental tasks conforming more closely to the characteristics of naturally occurring endeavors might provide more appropriate measures of children's persistence. (Stein & Friedrich in press, p. 13).



Cues from the "Mr. Rogers' Neighborhood" programs were expected to increase persistence for children in the prosocial television condition.

On both tasks, attention to the tasks without manipulation was higher for children in the prosocial cues treatment than for those receiving irrelevant cues, but persistence time did not differ as a function of cues. The differences associated with cues appeared for children in both television viewing conditions probably because children in the neutral viewing group were familiar with the program from home viewing. Data on home viewing indicated that many were steady viewers.

Why should cues affect nonmanipulative attention but not persistence? One explanation may be that children were studying the task or stopping to consider the next move. Careful consideration and thought in task performance is emphasized in many "Mr. Rogers' Neighborhood" programs, so cues from the programs might stimulate such behavior. An alternative explanation is that the prosocial cues were simply more novel and interesting than the irrelevant cues so that they distracted the child's attention more often from active manipulation of the task. This explanation cannot be entirely rejected, but it appears less likely than the first because persistence time did not decline with prosocial cues nor did distraction increase as one might expect if the cues were attracting the child's attention away from the central task.

In summary, short-term exposure to prosocial television programs stressing persistence and independence led to increased motor inhibition, and limited increases in reflectivity and persistence for girls but not for boys. Cues from the prosocial programs in the tasks were associated with more quiet attention to the tasks but not with increased persistence. (Stein & Friedrich, in press, p. 19)

Adults in the environment may provide a variety of conditions that should enhance the effects of television viewing. In the second laboratory study (Friedrich & Stein, 1975) two adult-led rehearsal methods were assessed: verbal labeling of program content and role playing of program sequences.

Verbal labeling and questioning of the child is likely to provide the child with a means of coding and cognitively representing material that will be considerably more efficient than the methods he generates on his own. Preschool children do not readily produce verbal labels to code their experience, though they often can use such labels if someone else provides them. (Flavell, Beach, & Chinsky, 1966). For example, four-year-old children learned and

recalled more of a model's behavior when an adult labeled the behavior verbally than they did through observation alone (Coates & Hartup, 1969). Bandura and his colleagues have also demonstrated that children and adults learn observed materials more efficiently when they have useful verbal labels for what they observe (Bandura, 1969). As television stimuli are more complex and more numerous than modeling sequences used in the laboratory, such devices for understanding and storing material may be important. Verbal labeling probably also enables the child to generalize television content appropriately to new situations.

Role playing may be a particularly effective way for young children to rehearse and incorporate the content of the programs in their own ways. Asking children to take the role of another may engage them personally and enhance their understanding of others' feelings and behavior. There is some evidence that encouraging children to role play increases the likelihood of helping and sharing behavior (Staub, 1971).

In the verbal labeling rehearsal, an adult read books in which the important concepts and behavior in the television programs were presented. The first half of the book was a simplified version of the television program and the second half was a parallel story dealing with children in which the same labels were used. Questions followed the stories so that the children were able to rehearse these verbal labels. The books were read to the children in a session immediately following each television program.

In the four role playing rehearsal sessions children used puppets like those in the television program to replay some of the central events of the story. They then used puppets of children to role play parallel situations involving children.

The subjects for this study were kindergarten children from middle- and lower middle-class families. Four groups of subjects saw a series of four "Mr. Roger's Neighborhood" programs that were focused on feelings such as jealousy, fear and anger, expressing sympathy, helping, sharing, and understanding others. A control group saw the standard neutral films on videotape.

The viewing and rehearsal sessions were conducted in small groups (3-4) with an adult. The rehearsal training was 15-25 minutes in length. Of the four groups who saw the prosocial films, one received both verbal labeling and role playing, one received verbal labeling only, one received role playing only and one was given irrelevant activities (educational games and books). These irrelevant activities were also given to the neutral film group.



Two principal measures were designed to tap learning of program content: a multiple choice "content test," testing recognition of both specific content from the programs and generalization of program themes to other situations and an interview using a puppet in which the child had the opportunity to verbalize both specific content and generalized learning. All groups who had seen the prosocial programs performed significantly better on both measures than those who had seen the neutral programs. Verbal performance on the generalization section indicated that they were also able to apply the content to everyday situations involving children.

Learning was facilitated by verbal labeling training, particularly for girls. In general, role playing did not facilitate learning by itself, but boys did best with the combination of both types of treatment.

Helping behavior was the focus of two performance measures: fantasy helping during one part of the puppet interview and actual help given another child in an experimental situation. The alleged reason for the subject to be present was to make a collage. Attempts to repair the other child's collage were scored as helping.

Short-term viewing of the prosocial television programs by themselves did not affect the performance of helping behavior. Additional rehearsal training, however, led to significant differences. Role playing training following prosocial television was associated with higher levels of helping for both the behavioral and the fantasy measure, particularly for boys. Girls who received the combined condition were even more helpful than those who received role playing alone, but boys were most helpful when they had only role playing rehearsal.

In summary, children can learn content through relatively short-term viewing of prosocial television. Translating this content into actions which are quite removed from the program content requires additional rehearsal. Verbal labeling rehearsal facilitated learning of program content and generalization; role playing rehearsal facilitated performance of helping behavior. Nevertheless, the additive as well as the differential effects of the two types of training are noteworthy. The combined training condition often led to the highest scores for both sexes.

The latter two studies presented have led us to some tentative conclusions about prosocial television. Children can learn a variety of rather complex ideas from brief exposures to television: understanding feelings, sharing, helping, knowing that wishes do not make things happen and appreciating the value of an individual as a unique person. More important, they are able to generalize televised content to situations in their own lives. Performance or acting upon the ideas they see on television is less clearly influenced after the brief exposure in the last two studies but our first study indicates

that longer exposure does influence persistence, self-regulation, and interpersonal behavior in a fairly general fashion. After short-term exposures, persistence and self-regulation did improve for girls who saw the prosocial programs in one laboratory study, but not consistently across all measures. In the second study, helping behavior was not increased by exposure to the programs alone though it did increase when role playing, rehearsal followed the programs. (Stein & Friedrich, in press, p. 25.)

The present study was designed to incorporate and expand the previous findings in a natural setting in order to determine ways in which adult caregivers and teachers might use prosocial television and related training materials to enhance social development.

The dependent variables fell in four major categories:

- 1) positive social interaction with peers--cooperation, nurturance, helping, sharing, understanding, and verbalization of feelings.
- 2) self-regulation and achievement behavior--task persistence, freedom from distraction, willingness to tolerate delay, spontaneous acceptance of rules, independence and autonomy.
- 3) creative fantasy and imaginative play
- and 4) assertiveness and aggression.

The first objective was to determine the effects of a well-designed television program, "Misterogers' Neighborhood", on preschool children's personal, social, and emotional development. The "Misterogers" program was selected as the best current available program and therefore the one most likely to produce some effects. The specific areas of children's development studied were:

- a) positive social interaction skills such as cooperation, helping others, sharing, showing affection, and verbalizing feelings.
- b) self-regulation and achievement behavior including persistence, freedom from distraction, initiative, independence, tolerance for minor frustrations, and accepting responsibility.
- c) creative fantasy.
- d) assertiveness and aggression.

The second objective was to investigate some factors in the child's environment that may enhance the effects of viewing the television program. The environmental variables examined were:

- a) cues provided by objects and materials that were similar to the television programs.
- b) presence of adults who were trained in the principles that are promoted on the television program.

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- c) verbal labeling and rehearsal of events and activities in the television program.
  - d) role-playing based on the program.
  - e) reinforcement consequences the child experiences when he adopts behavior that is encouraged by the program.

The third objective was to explore the variables described above in a natural setting as well as in the controlled conditions of the laboratory. Examination in a natural setting provides fairly direct information about the applicability of the research findings to "real life" settings. It also determines whether the variables of interest are sufficiently powerful to be manifested across a variety of situations and despite interference of other sources of variation.

A related objective was to provide information that could be useful in planning of day care programs for preschool children. Television is an available and inexpensive tool that may have beneficial effects on children if used properly. The research was designed to spell out some of the conditions under which it might be so used.

#### Methods

##### Subjects

The subjects for the study were children enrolled in Head Start programs in Philadelphia. Their ages ranged from 3 years 4 months to 5 years 4 months. All centers were located in the inner city except one that bussed children from ghetto neighborhoods to a school in the suburbs. There were five centers containing a total of 13 classes. The maximum enrollment in each class was 15 children. Baseline data were obtained during the experimental period for 141 of these subjects.

All children came from families whose incomes qualified them for Head Start. The maximum income for a family of four was \$4300. Both black and white children were included in the sample, but they were in different centers due to the residential segregation of the city.

##### Settings

Each class had one head teacher, one aid and occasional parent volunteers. The classroom procedures in different centers varied. A part of the day in each class was devoted to teacher-directed learning activities, but the relative emphasis on such structured activities varied. Thus, the time spent in free activity varied. Classes in one center (Center A) were half day (8:30 - 1:00 or 12:30 - 4:00). Classes in the other centers were full-day (8:30 - 3:00). All programs provided meals and a rest period.

In three centers (Centers A, B, and C), each class was housed in a separate classroom. Classes sometimes shared playground facilities and classes were occasionally combined for group activities, but most of the indoor activity occurred in a self-contained classroom of 12-15 children. In the fourth center (Center D), two classes shared a large room with moveable partitions that could be used to create separate groups. In practice, the teachers and aids often divided the children into four groups of six or seven each for learning activities. In the fifth center (Center E), three classes shared a large central room. There were several small rooms to which groups of 12-15 children were sometimes taken for learning activities. In all centers except one, physical facilities were limited in space and there was limited outdoor play space immediately adjacent to the classrooms. Therefore, children were often taken to nearby parks and playgrounds for outdoor activities.

### Design of Study

Baseline data were collected for all classes from January through mid-April. Classes were then assigned to one of four experimental treatments: 1) Prosocial television with teacher training for rehearsal activities and relevant play materials in the classroom. 2) Prosocial television with relevant play materials in the classroom, 3) Prosocial television with irrelevant play materials in the classroom, and 4) Neutral films with irrelevant play materials in the classroom.

The experimental treatments lasted eight weeks from mid-April to early June. All Mr. Rogers programs were transferred from video-tape to 16 mm. movie film in order to permit showing in the classroom. The major reason for this change in medium was that projectors were available and video-tape equipment was not. In addition, the larger image provided by movie film was thought to be more appropriate for group viewing than a television screen. The neutral films were 16 mm. movies selected from the public school film library.

A total of 20 films were shown in each classroom during the eight-week experimental period. Teachers presented the films at a convenient time in the class schedule. Each teacher received a weekly supply of films to be shown on a schedule decided by her during that week. The order of the series during the eight weeks was different for each center.

Teachers were given freedom to establish whatever viewing procedures they had previously determined were the most successful for their particular situations. If they wanted suggestions, the following were given:

- 1) Select a time early in the day before the children are tired.
- 2) Choose an area in the room that can be darkened, and that is as free of distracting materials as possible.
- 3) Have children sit on chairs.
- 4) Provide for bathroom and thirst needs first.

Experimental Prosocial Television Programs. The 20 Mr. Rogers Neighborhood programs were selected to represent a variety of prosocial themes. In selecting the 20 'Mister Rogers' Neighborhood films these criteria were used: (1) each series would be a complete dramatic sequence with enough action to maintain a high level of interest among the children, and to stimulate subsequent dramatization by them in their play; and (2) the prosocial themes in each series needed to be clear to facilitate teaching and learning and needed to be relevant for young children in a group setting. Programs were arranged in sequences of two to four programs each. Those within a sequence followed one plot line throughout the sequence. The themes represented in the programs are described in Table 1.

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 Table 1 about here  
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The seven sequences and the themes identified in each are described in Appendix A. All of the programs were edited from 23 minutes to 14-20 minutes. The Neighborhood of Make Believe section of the program in which puppets and actors play out a plot involving the themes of interest in this study was retained in all programs. The opening and closing scenes in which Mr. Rogers greets the audience and says good-bye were retained. Other sections presenting songs or commentary by Mr. Rogers about the prosocial themes and a few scenes that appeared especially interesting to urban black children were also retained. The content that was eliminated generally involved visits to musicians, artists, stores and the like.

Neutral films. Films were selected from the catalogue of the Philadelphia Public School Film Library and The Pennsylvania State University Audic-Visual Service. They presented miscellaneous content, with no strong emphasis on prosocial behavior. Although it was originally intended to use only black and white films (because the Mr. Rogers programs were black and white) the dated content of most black and white films made this procedure questionable. Virtually all of the movies made within the last 15 years were color. Therefore, about half the films were in color and about half were black and white. Because of uncertainties in scheduling delivery of films, alternate films were ordered for each week. If the scheduled film did not arrive the alternate was shown. Therefore, the content of the neutral films varied between classes. A summary of the neutral films appears in Appendix B.

Prosocial Materials. The prosocial materials were designed to provide opportunity for rehearsing the programs content. The materials were designed for individual use and for use in small groups and cooperative play. There were dramatic play materials, craft materials, books, and records. The records were from "Mister Rogers' Neighborhood" as were the books except for two. Pictures, posters, and a puzzle were also available from "Mister Rogers' Neighborhood." Portable play wheels and stand-up figures were available commercially. The other materials were created especially for the study. The list of prosocial materials appears in Table 2. Suggestions for their use appear in Appendix C.

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 Table 2 about here  
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Irrelevant materials. Books, games and records made up the materials for the neutral condition. They were as devoid of prosocial content as possible. The books covered a variety of subject matter (humor, transportation, nature) and a range of complexity. The games were also diverse. Some encouraged experimentation with design and color others could be purely manipulative or cognitive according to the child's level of maturity. Lotto games were also included. The records could be used for listening and singing at rest times and during many activities. Two of the records encouraged responses from the children. A list of the irrelevant materials appears in Table 3.

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 Table 3 about here  
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Several pages of suggestions for the use of the neutral material were prepared for the teachers. These appear in Appendix D.

Teacher training. In addition to the "Mister Rogers' Neighborhood" films and prosocial materials for free play, teachers and aids in the training condition were given a training course and supplied with additional curriculum materials for the children in the training condition. Teachers and aids were paid for the time spent in the training sessions, and they could elect to earn one academic credit as well. The goals of the teacher training program were two-fold (1) to increase the teachers' awareness and recognition of prosocial behavior in children and (2) to provide teachers with methods of eliciting and reinforcing prosocial behavior through specific learning experiences to be introduced in their classrooms.

Six two-hour sessions were held. Each session dealt with specific kinds of prosocial behavior. All the training materials



which had been designed for the children were introduced. The conceptual framework underlying the materials and the techniques to be used in presenting them to the children were examined. Although there was no opportunity for the teachers and their aids to view the films prior to showing them to the children (and this was their chief criticism of the course), they did have a synopsis of each film, a list of the themes from each film, and scripts for the forty circle times in advance.

The first four meetings of the class were held prior to beginning the television series with the children. The last two were held during the first week of viewing and training for the children. Thus they were able to ask questions and seek clarification while they were actually using the materials with the children.

Teachers were asked to observe the following sequence in their daily schedules. Beginning early enough in the day to allow adequate time for each segment: viewing the film, active play, circle time, and free play indoors with all training materials being available. Children's choices were not to be limited to these materials, however. Time for active play between film viewing and circle time was requested so the children would not be required to sit attentively for a prolonged period of time.

Forty daily circle times were planned for the eight-week period, with shorter circle times for viewing days (10-15 minutes), and longer ones for nonviewing days (20-25 minutes). (A sample script for circle time appears in Appendix E). All the materials were designed to help the children rehearse the program content and to make generalizations from it. Songs and chants, props for dramatic play, and verbal labeling books were created for this purpose. In addition, several Mr. Rogers' books, as well as commercially available books, with relevant prosocial content were used. There were also opportunities for the children to use musical instruments which they made to accompany the weekly Friday review of songs and chants.

The songs and chants were recorded on two cassettes to facilitate teaching and learning. They were illustrated by 8 x 10" photographs in loose-leaf books which teachers held for the children to see while they sang the corresponding song or chant.

Teacher used picture puppets of all the Rogers' characters with a backdrop modeled after "Mister Rogers' Neighborhood of Make Believe" from the program as they encouraged the children to help them retell the action of the story viewed on the film with special emphasis on how the characters felt about the action. Teachers used flannel boards with appropriate pieces and face masks designed like fans in a like manner. Other dramatic props were hand puppets, often used with specific scripts generalizing the program content by using parallel stories, and a city backdrop with stand-up figures to

encourage the children to describe parallel situations from their own experiences, e.g., rules for outdoor safety, rules for school, etc. The teachers moved the appropriate figures in front of the city backdrop. With the puppets, however, the children repeated the lines from the script after the teacher, using their own set of puppets.

Since the picture puppets and stand-up figures were small, and could not be easily seen by the entire group in the circle, teachers were requested to place them on a table early in the morning in the area where the children would be hanging their coats as they arrived. Each child then had an opportunity to see the materials at close range and to play with them briefly. All of the dramatic props, except for dress-up clothes and masks were introduced in this way. After materials were used at circle time, teachers were requested to make a place in the room for them where they would be readily available to the children following circle and at other times as well.

Several games were designed to play at circle time to illustrate sharing, individual differences and waiting. For four of the series there were props for socio-dramatic play following circle time. These revolved around a rocket and a plane outlined on the floor with red plastic tape, with a portable play wheel, telescopes and telecans (walkie-talkies).

A party which appeared in one of the series was dramatized by the participating groups. Props were available and cues given for the children to dramatize other special events from several of the series. One of these was a "Festival of Mad" organized for the purpose of coping with angry feelings.

Many other activities were planned to follow circle time. These included making musical instruments, playing circle games related to various themes, making costumes and other props to stimulate dramatic play.

All of the written materials used for teacher training were compiled in a teacher's manual. These included the forty scripts for circle times and suggested activities to follow circle times. On the list of prosocial materials appearing in Table 2, those that were designed specifically for the training condition are so indicated by asterisks.

#### Assignment of Classes to Conditions.

Due to the procedures involving classroom materials and activities it was necessary to assign whole classes to experimental conditions. There were several constraints on random assignment. Where possible, different classes within a center were assigned to different conditions. To the extent possible, ethnic background of the children was balanced across conditions. Observers who had spent several days

observing in each class during the baseline period rated each teacher on a variety of dimensions designating teacher warmth and support, amount of structure, and use of harsh or arbitrary disciplinary techniques. The teacher rating form appears in Appendix F. Conditions were balanced as much as possible for these classroom and teacher characteristics. The physical structure of the centers placed some limits on possibilities for assignment. The two classes in Center D that shared a large room had to be in the same condition. The three classes in Center E that shared a large room with smaller rooms opening off it had to be given the same type of classroom materials, though it was possible for them to see different films. In Center A two classes used the same room at different times, so they had to be assigned to the same type of classroom materials. Finally, assignment to the teacher training condition required that both teacher and aid be willing and able to attend the teacher training sessions. The characteristics of the classrooms assigned to each condition are summarized in Table 4.

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 Table 4 about here  
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Measures.

Individual observations. The central data were observations of natural behavior in the classroom. The observational procedures were similar to those in an earlier field experiment (Friedrich & Stein, 1973) except that the number of categories was expanded and modified in a variety of ways. The following general categories of behavior were scored aggression, verbalization of feeling, understanding others self-regulation positive social interaction, persistence, independence, fantasy, and calling attention to one's own accomplishments. The last category was the only behavioral indicator we could devise that might indicate self-esteem. For those categories involving interaction with others, the scoring included an indication of whether the behavior was directed toward adults or peers. When any category was scored, the immediate consequences if any, were recorded. These were classified as positive and negative and as social (from adults or from peers) or material. The observation categories are summarized in Table 5. A detailed observation manual appears in Appendix G.

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 Table 5 about here  
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Seven women served as observers. All had college backgrounds relevant to psychology or education. Four were graduate students or had graduate degrees in psychology. The other three had Bachelors degrees. Four of the observers were white, two were black, and one



was Chinese-American. Five of the observers were unaware of the hypotheses of the study or the exact nature of the types of treatments being administered. They were told that the study was concerned with evaluation of different types of curricula in Head Start programs. The remaining two observers were more familiar with the purpose and content of the study, but were not told which groups received which treatment. All observers knew that films were part of the curricula being investigated and were asked to leave the classroom when films were shown. Questioning at the conclusion of the study indicated that these procedures were reasonably successful in maintaining the observers' ignorance of treatment conditions operating in individual classrooms, though most did realize that the study had something to do with the Mr. Rogers' program.

The individual observations were carried out by observing each child for a five-minute period. For each minute, the occurrence of any scorable behavior category was recorded along with the consequences, the object of the behavior, and the school activity in which the child was involved. These observations were performed in randomized order within a classroom.

Of 187 children observed during the baseline period 32 were dropped from the sample because they were not present sufficiently often to obtain at least 30 minutes of observation. Of the remaining 155, 115 were observed for 60 minutes or more and 40 were observed for periods totaling from 30 - 60 minutes. During the experimental period, 14 additional subjects were lost because they left school. The remaining 141 subjects were observed for at least 45 minutes each during the experimental period. All but 9 of these children were observed for one hour or more.

Data for any one child were collected in approximately equal amounts by at least three different observers during the baseline period and during the experimental period. It was not feasible to rotate all seven observers through all classrooms because of the need to recognize children and identify them by name. However, the same observers collected data in a given class during both the baseline and experimental periods so that idiosyncrasies of particular observers would not influence change scores. In addition, reliability data collected before the baseline period began were examined closely for systematic differences among observers, and observers were given further training to eliminate the few biases identified.

#### Group observations

Three activities occurred regularly for each class: circle time in which the teacher led group activity for all children, rest time when all children were required to lie down quietly for some span of time, and clean-up time when children were expected to help put away toys and materials. Each of these activities appeared well

suites to provide information about particular types of prosocial behavior that were of interest in the study. In a sense, they provided stimulus conditions that were somewhat more comparable for all children than was the case during the remaining classroom activity. For that reason, group observations were developed that were focused on particular aspects of prosocial behavior and that could be used for the entire group of children in a short time span.

The group observations all followed a point sampling procedure. The names of all children present on a given day were arranged on the observation sheet. When the appropriate activity began, the observer watched each child just long enough to score that child's behavior, then she moved to the next child. In this fashion, all children in a class could be scored once in a period of two or three minutes. The group observations were done by the same people who conducted the individual observations. No individual observations were collected during the times used for group observations.

Circle time. The circle time observations were conducted only once during each day when there was a formal activity involving all children in teacher-directed activity. Each child was rated on a scale from 1 - 5 with the points on the scale being defined as follows:

1. Overt disruptive activity or leaves group.
2. Inattention, no overt disruption.
3. Follows teacher.
4. Follows teacher, facial expression shows interest.
5. Follows teacher, and adds to teaching instruction through verbal contributions, motor involvement in activity, or elaborating on activity.

Observers rated the entire class as many times as possible. For each set of ratings of the class, the activity was noted and total time was recorded.

For the analysis, the ratings on a given day were averaged. Then all ratings for the baseline period and for the experimental period were summed and divided by the total number of days rated, fewer days of observations were excluded from the analysis. The mean number of days of observation for each child was 11.85 for the baseline period and 10.64 for the experimental period.

Pick-up time. During the period when materials were being put away after free play, the observations were directed to assessing the child's spontaneous efforts to take responsibility. Using a point sampling procedure the behavior of all children was scored on a scale of 1- 6 with the points on the scale being defined as follows:

1. Obstructing efforts to pick up, continues to take out toys.
2. Refuses to stop or give up toys or equipment until teacher insists.
3. Does not participate.
4. Assists in routine pick up by working with teacher's supervision.
5. Picks up or cleans up cooperatively with other children without direct supervision from teacher.
6. Picks up or cleans up without supervision from teacher and without help from other children.

For the analysis, ratings for each child were averaged for a given day. Then ratings for the baseline and experimental periods were summed separately and divided by the number of days observed. Thus, the score represents an average across days. Children with fewer than five days of observation were excluded. The mean number of days of observation for each child was 10.53 in the baseline period and 11.32 in the experimental period.

Rest time. The rest time ratings were designed to tap obedience of classroom rules as one index of self regulation. The rating began when the teacher announced that it was time for the children to lie down for their rest period. The observer recorded for each child the time at which the child first lay down (to the nearest 30 seconds). The room was scanned continually for children who manifested problems that required admonishment or attention from the teacher. After all children were quietly resting the total time was recorded and each child was assigned an overall rating from 1-3 on the following scale:

1. Child on mat or cot: no admonishments from teacher beyond first instruction only routine attentions, and no disruptive activities.
2. Outlets after teacher's admonishments or soothing -- minor interactions with other children or playing with nearby toys.
3. Quiets only after extended individual attention or much disruption (crying, protesting, running around).

A score for each child for a given day was obtained by multiplying the behavior rating (1 - 3) by the amount of time the child spent before lying down. A constant of 1 was added to eliminate 0s and a square root transformation was performed to reduce skewness. A low score indicates an obedient child. The mean number of days of observation for each child was 9.50 in the baseline period and 10.31 in the experimental period.

#### Individual measures outside the classroom.

Individual measures of motor inhibition, reflection-impulsivity, helping behavior, and delay of gratification were administered

outside the classroom in order to provide more controlled tests of some of the prosocial behaviors of interest than were possible in the classroom. The measures of motor inhibition and reflection-impulsivity were administered during both the baseline and experimental periods. Data were collected during the last four weeks of the baseline period. Experimental period data were collected during the last four weeks of television viewing and were completed during the four weeks after the television viewing ended.

Testers. Seven female adults carried out the testing. These women were different individuals than the observers, and all but one of them had had little contact with the children before the testing. All but one were unaware of the purposes of the study. (The one person who was informed was the staff coordinator who completed testing for a few children when time did not permit testing by other testers). All testers were the same ethnic group as the children they tested. Testers were trained by the research staff and were observed during their initial testing sessions to be sure they were following appropriate procedures.

Motor-inhibition measure. The measures of motor inhibition were the Draw-a-Line Slowly and Walk-a-Line Slowly measures developed by Maccoby et al. (1965). The Draw a Line Slowly test consists of a picture of 2 telephone poles with 3 wires between them and a fourth wire or line conspicuously missing. On the first trial subjects were given the picture of the 2 telephone poles and asked to draw the missing wire with a ruler. On the second trial, they were asked to draw the wire as slowly as they could.

The Walk Slowly test was similar to the Draw a Line Slowly test, except that it involved large motor responses. A 6'5" walkway, marked with masking tape was laid out on the floor. The child was instructed to walk down the "sidewalk" without stepping on the sides of the walkway. After the child walked down the first time, the experimenter "took a turn" walked down the sidewalk deliberately stepped on the side and remarked, "Oh I stepped on the side." The child was asked to walk down the sidewalk again but as slowly as possible.

Reflection-impulsivity. The Kansas Reflection-Impulsivity Scale for Preschool Children (Wright, 1971) was administered immediately following the Motor Inhibition tests. It is similar to the Matching Familiar Figures Test (Kagan 1965) but appropriate for preschool children. Two parallel forms each contain five practice items and ten test items bound in a loose-leaf notebook. Each child received one form in the baseline test and the other form in the experimental period test. The forms were counterbalanced across time periods.

On each item, the child was presented with a picture or standard and asked to find a matching picture from a number of stimuli in an array on the opposite page. The pictures were simple, black and white drawings of objects familiar to young children. The latency before the child's first response was recorded from a stopwatch calibrated to 1/10 of a second. The number of errors before the correct response was also recorded. The scores obtained were average latency and average number of errors. In addition, an overall impulsivity score was calculated by a procedure developed by Wright (personal communication). All latency and error scores were first converted to T-scores (Mean = 50, SD = 10). The T-score for latency was subtracted from the T-score for errors to obtain an impulsivity score. High impulsivity scores indicate relatively high errors and low latencies. Low scores indicate relatively low errors and high latencies -- that is, they indicate reflectivity.

Helping behavior. The measure of helping was the collage measure used in an earlier study (Friedrich & Stein, 1975) and reported in the progress report on the first year of the research.

In an individual session, a female experimenter seated the child at a table on which two portable easels rested. On one easel there was a collage made of construction paper, cloth, and shiny stickers. This collage was torn and five of the pieces were falling off. The experimenter explained that the child would make a collage, then told the child that another child had made the torn collage, but had torn it and knocked the pieces down accidentally. The other child had been especially sad and angry because the collage was for his (her) mother's birthday. The experimenter said she would take that child his (her) collage, but it was too bad it was torn.

Following the presentation of this sad story the experimenter left the child seated for one minute while she gathered materials for the collage. The subject was then given materials to make a collage. After the child finished, the experimenter said "Would you wait just a minute while I finish what I'm doing?" If the child had not repaired the torn collage after one minute of waiting the experimenter said: "Is there anything you can think of that would make the other boy (girl) feel better?" After a pause, the experimenter then asked the subject to put the other child's collage in a box so she could take it to that child. The purpose of this section was to permit the child to touch the collage if he or she felt hesitant to do so. Finally, the experimenter gave the subject five shiny gold stars and said that they would make a nice border for the collage. She said "You can take as many as you want for yourself and give as many as you like to the other boy (girl)."

The principal scores obtained were those measuring the amount of help given to the other child. The number of pieces repaired



time spent helping, and latency before first helping act were all recorded. As there were five pieces falling off the collage, and one rip, the maximum number of pieces repaired was six. Extra helping acts included repairing a piece twice, placing extra tape on some sections, and adding pieces. These were given one point each. In addition a few children volunteered to make a new collage for the other child or to give that child the one they had made for themselves. They were allowed to do either of these things. Both forms of helping were given a score of six since they appeared equivalent to full repair. The total helping score was the sum of points obtained for all types of helping acts. The time spent helping was the number of seconds spent on all helping acts. The latency was the number of seconds before the first helping act.

Verbal suggestions for helping were scored separately with one point for each suggestion. Comments or sympathetic remarks about the other child were also scored. Sharing was scored as the number of gold stars given to the other child at the end of the session.

Delay of gratification. The procedure for measuring delay of gratification was adapted from a task developed by Mischel and his colleagues (Mischel, Eberson, & Zeiss, 1972). The child was seated at a table and the experimenter showed him/her four toys. She explained that they would play with the toys later. Then she pointed to a ball and explained that they would play a game in which she would go behind a screen and the child could ring the bell to bring her back. This procedure was practiced several times. The screen consisted of a wooden frame covered with printed material and placed on a table facing the child's table. A small hole was cut in the material through which the experimenter could watch the child. Next, the experimenter opened a cake tin containing a pretzel and two small marshmallows. She asked the child which he/she would rather have. She then explained that she was going behind the screen for a while. The child could bring her back by ringing the bell, but would get the nonpreferred food item if that happened. If the child waited until she came back by herself, the preferred food item would be given. This contingency was explained in different ways, and three questions were included to determine that the child understood the contingency. If the child still did not understand, it was explained again and the child was questioned again.

Two types of material were provided for the child to play with while waiting for the experimenter--blocks and play dough. These materials were selected because they were unstructured and would lend themselves to fantasy play. Previous research on delay of gratification indicated that inducing the child to think about fun things or engage in fantasy led to increased delay of gratification (Mischel et al., 1978). As one of the possible outcomes of the prosocial television treatments was increased fantasy play it was

expected that children exposed to prosocial television might use fantasy-related materials more effectively in the delay of gratification situation than the control group.

After these instructions, the experimenter sat down behind the screen. At each 15-second interval she classified the child's behavior in one of three categories: touching the toys, looking at the toys without touching them, or looking away from the toys. If the child rang the bell, she recorded the time and returned to give him/her the nonpreferred reward. If the child did not ring the bell, the experimenter returned after 10 minutes and delivered the preferred reward. In both cases the child was permitted to play with a toy motorcycle and other toys for a few minutes before returning to the classroom.

Detailed instructions appear in Appendix I.

## Results

### Individual Observations

#### Derivation of Final Variables

As there were different amounts of observation time for different children, the raw frequencies of each behavior category were divided by the number of minutes observed to obtain the rate of each behavior. For positive social interaction, verbalization of feelings, brings attention to self, and fantasy, scores were separated according to the object of the behavior (adults, peers, or no one). After examination of these initial distributions and of the intercorrelations among categories in the baseline period, some variables were combined and others were eliminated because of low frequencies. All scores were then converted to logarithms ( $\log_{10}$  of  $X + 1$ ) in order to reduce skewing of the distributions.

Further combination and elimination of variables was based on intercorrelations of the baseline scores (after the log transformations), and on a factor analysis. Variables were combined when they correlated with one another when they loaded on the same factor, and/or when they were frequently confused by observers. Only those combinations where the individual subparts were conceptually related were retained. The final list of combined variables appears in Table 6.

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 Insert Table 6 about here  
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### Reliability

Inter observer agreement was calculated at the beginning of the baseline period. Children were scored simultaneously by pairs of observers for 205 intervals of five minutes each. Observer agreement was calculated by the following formula:

$$\frac{2 \times \text{number of agreements}}{\text{Total number of scores}}$$

This is a stringent means of evaluating reliability because it does not count intervals when neither observer scored a behavior as agreements.

The percent agreement for each behavior category included in the final analysis appears in Table 7. The categories involving positive social interaction, however had not been separated by

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 Insert Table 7 about here  
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object (adult vs. peers) when the original tabulations of reliability were made before the beginning of the baseline period. Hence the estimates of reliability of the combined categories are based on agreements for each component category regardless of object. It appears that this change is unlikely either to inflate or decrease the reliability of these categories.

Despite repeated attempts to resolve scoring differences in the training period, the rate of agreement on many categories was relatively low. This finding led to further analysis of the disagreements among observers. Two types of disagreements can occur: the two observers score different categories in the same time interval or one observer scores a behavior and the other observer scores nothing. The latter type of disagreement accounted for the majority of disagreements in almost all categories of behavior (see Table 7). The major reason for this form of disagreement appeared to be that observers placed in different positions with respect to the child were able to see and hear different things. For example, one observer might hear and understand a sympathetic remark when the other did not. If both had heard the same remark, they agreed on scoring. Thus, much of the observer disagreement appeared to be due to differences in the amount and kind of behavior observed rather than to differences in the classification of behavior. Problems of accurate observation were particularly acute due to crowded classrooms and noisy outdoor areas. Understanding speech was made more difficult by dialect differences among children.

Disagreements were also examined carefully to detect observer biases or tendencies for one observer to use one category more than another. The only category on which overuse occurred was tolerance of delay. It was scored more frequently by one observer than by all the others.

One conclusion to be drawn from these reliability data is that the observations represent only part of the behavior actually exhibited by a child. It is clear that any one observer often failed to detect behavior that might have been scoreable. There appears no reason, however, to expect that the amount of behavior missed by observers would differ across treatments. Therefore the overall quantity of behavior scored may have been lower than the true scores, but the proportion of behavior that was scored probably was observed and classified more accurately than the reliability figures suggest.

Baseline Differences by Sex and Classroom

Baseline observations were submitted to analyses of variance of sex x treatment and sex x classroom in order to determine what initial differences existed between groups. Males were significantly higher than females on hostile aggression ( $F = 8.25$  1, 146 df  $p < .01$ ), non-verbal interaction with peers ( $F = 7.09$  1, 146 df  $p < .01$ , and positive social interaction with peers ( $F = 5.61$  1, 146 df  $p < .01$ ). Females were significantly higher than males on prosocial aggression ( $F = 3.92$  1, 128 df  $p < .05$ ).

Classroom differences appeared on most variables. The assignment of classes to treatment was partially successful in balancing classroom differences across treatments but significant differences for treatments remained for total aggression ( $F = 2.68$  3, 146 df  $p < .05$ ) hostile aggression ( $F = 2.81$  3, 146 df  $p < .05$ ), imaginative play ( $F = 2.80$  3, 146 df  $p < .05$ ), teacher-led cooperation ( $F = 5.93$  3, 146 df  $p < .01$ ) and tolerance of delay ( $F = 6.30$  3, 146 df  $p < .01$ ). Thus, further analyses were designed to control for baseline differences among treatments and classrooms.

Intercorrelations of Behavior Categories

The intercorrelations of the combined variables and a few of the single variables appear in Table 3. The patterns of social behavior

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Insert Table 3 about here  
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in this sample were similar to those reported in other studies (Friedrich & Stein, 1973; Maccoby & Masters, 1979). All categories of social behavior to peers, aggressive and prosocial were positively related. As in earlier studies, it appears that some children are



more socially active than others and exhibit higher levels of all kinds of social behavior. Positive interactions with peers were not related, however, to spontaneous interactions with adults. This relation cannot be assessed for aggressive behavior, because such behavior was rarely directed to adults. The separation of social behavior directed to adults and to peers is consistent with earlier literature on dependency and attention-seeking (Maccoby & Masters, 1970).

Task persistence was negatively related to social behavior with peers, particularly positive social behavior and imaginative play. This negative relation was not found in our earlier study (Freidrich & Stein, 1973). In the settings observed in the present study, there appears to be more conflict between peer interaction and independent task-oriented behavior than in the previous study.

Teacher-led cooperation as Teacher-led instruction and tolerance of delay as waiting. Examination of the baseline correlations and analysis of variance suggested that teacher-led cooperation and tolerance of delay as observed in this sample were determined primarily by the teachers' behavior rather than by individual characteristics of the children. The classroom differences for these two variables were much larger than for any others ( $F = 17.76$ , 12, 128 df,  $p < .01$  for teacher-led cooperation and  $F = 20.11$ , 12, 128 df,  $p < .01$  for tolerance of delay). Teacher-led cooperation appeared to reflect how much the teacher structured group learning activities and to what extent children were required to participate. Tolerance of delay appeared to be determined primarily by the amount of time during which waiting was required or expected in a given classroom. Some classes had many more "delays" than others. The conceptualization of these two variables as positively related indices of classroom procedures rather than of children's behavior is consistent with findings by Risley (cited in Gump, in press) that highly structured early childhood programs require more transition time between activities than less structured programs. For these reasons, these two variables were used throughout the analysis as indicators of classroom procedures and were designated "teacher-led instruction" and "waiting" respectively.

In the baseline period, teacher-led instruction was negatively related to aggression (primarily hostile aggression), imaginative play and task persistence. It appears that classes in which the teacher spent a considerable amount of time in highly structured activities provided less opportunity and encouragement for some types of social interactions among children and for independent task-oriented activity. Teacher-led instruction was not related to positive social interactions with adults, and the correlations with social interactions among peers formed no overall pattern. On some variables, there were slight negative relations, but on others the correlations were slightly positive or zero.

Waiting was positively related to teacher-led instruction, and the other correlates were similar for the two variables. Waiting was negatively related to aggression and task persistence. There were small positive correlations with positive social interactions with peers and negative correlations with social interaction with adults.

#### Stratification of Classrooms

Analyses of variance of sex  $\times$  treatment  $\times$  classroom (nested in treatment)  $\times$  time period (baseline vs. experimental) were performed on 22 individual behavior categories and on all 12 combined variables. The effect of primary interest was the treatment  $\times$  time period interaction. This interaction was non-significant on all variables. One reason for the absence of effects was the large variation among classrooms. Because classrooms were nested in treatment, the error term for all analyses was quite large.

Some data were available to account for the classroom differences. Classroom characteristics were summarized in Table 4. One source of such data was the observer's ratings of each class at the end of both the baseline period and experimental periods on scales intended to tap the affective quality and warmth of the teachers' interactions with the children, the types of discipline used, and the amount of structured learning activities. The ratings by observers on 27 scales (see Appendix F) were intercorrelated to derive clusters of scales. Two major clusters emerged. The first appeared to indicate the positive or negative affective quality or warmth of the teachers' interactions with the children. Scales that were positively correlated included: high degree of private or semiprivate communication; positively evaluates children; uses touch, physical affection in comforting; calm, acceptant, transactions attentive to pupils' needs; good natured and warm; supportive; patient; high tolerance of frustration. Scales that were negatively correlated in this cluster included: negatively evaluates children; publicly humiliates children (shame, ridicule); sarcastic.

The second cluster appeared to indicate the amount of structure. It included three positively correlated scales: academically oriented; class activities structured; insistence upon attention to task.

A second source was the baseline scores on teacher led instruction and waiting. A third source of classroom differences was the particular center in which the classroom was a part. Either because of population differences among children or because of shared policies and expectations within a center, classrooms within centers were more similar than those across centers.

Classes were rank ordered on observer ratings of affective quality, classroom structure and on the basis of observations of

teacher-led instruction and waiting. The rank ordering of classrooms on teacher-led instruction agreed fairly well with the rank ordering based on observer ratings of classroom structure.

The structure of the classroom was selected as being potentially the most influential characteristic for purposes of this study because many forms of prosocial behavior differed as a function of the amount of teacher-led instruction. Therefore, classrooms were stratified into two categories: 7 classes as low structure and 6 as high structure.

Although structure was considered one important variable, the classrooms in the high and low structure groups differed in several other respects that maybe pertinent to interpretation of the data. Those classified as high structure were relatively low in positive affect and warmth of the teachers according to the observer ratings. With one or two exceptions, those classified as low structure were relatively high on positive affect. Thus, the low structure classrooms appeared to have teachers who were warmer, more understanding and less harsh in their disciplinary techniques. Second, the low structure classes all had individual classrooms whereas all but one of the high structure classrooms were drawn from the two centers in which two or three classes shared a physical space. Third, most of the high structure classes were drawn from predominantly white centers. All of the low structure classes were from predominantly black centers. Finally, in the baseline period, high structure classes had lower levels of imaginative play, task persistence, and physical aggression.

Some additional variables may have contributed to treatment differences within the high structure category. The three classes assigned to the neutral and prosocial TV only condition were predominantly female (21 girls, 7 boys). The two classes assigned to the prosocial TV - Training treatment were predominantly male (19 boys and 9 girls). There were also larger differences among treatments in baseline levels of teacher-led instruction than was the case among the low structure classes. The three classes assigned to the Neutral and Prosocial TV only conditions (in one center) were re-grouped for instructional activities at the beginning of the experimental period in order to balance them for age. A new teacher was added to the center assigned to the Prosocial TV - Training treatment. Some changes in the experimental period may have resulted from these alterations within classes.

#### Analysis of Treatment Effects

A second means of controlling baseline differences among classrooms was the use of analysis of covariance. The final analysis of treatment effects were analyses of covariance of sex (2) x treatment (4) x classroom structure (2) with baseline scores as the covariate. Planned comparisons among conditions were performed by t tests when

overall treatment effects were significant.

The dependent variables in these analyses were 14 variables selected from the original 34 single and combined variables on the basis of examination of the means for baseline and experimental periods. The adjusted means for these 14 variables appear in Table 9. Those variables that were not analyzed further must be assumed to

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 Insert Table 9 about here  
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have shown no treatment effects, but many of these were single variables that were incorporated in the combined variables analyzed. The only two combined categories not submitted to analysis of covariance were prosocial behavior to peers and general social behavior to peers. The results of the analyses of covariance appear in Table 10.

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 Insert Table 10 about here  
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Positive interpersonal behavior to peers. The single variable, positive social interaction with peers was scored for all positive social interactions accompanied by speech that did not fit other prosocial behavior categories. The main effect of treatment was significant for this variable. The means appear in Table 9. Subgroup comparisons revealed that the Prosocial TV- Training condition was higher than all other treatments. Although all groups that saw "Mr. Rogers' Neighborhood" accompanied by teacher training and related curriculum materials were highest, there were some differences for classes designated as high and low structure in the patterns for the other treatments (see Table 9). For the low structure classes, both the Prosocial TV - Training and the Prosocial TV - Materials conditions were higher than the other conditions. In the high structure classes, the Prosocial TV- Training condition was high, but the Prosocial TV- Materials treatment was lowest.

One of the combined categories included the following single variables: positive social interaction with peers understanding others, and calling attention to oneself. There was a significant interaction of treatment x structure reflecting a pattern that was similar to the single category, positive social interaction. The means appear in Table 9. For the low structure classes, the Prosocial TV- Training and Prosocial TV- Materials treatments were higher than the Prosocial TV only and the Neutral treatments. In the high structure classes, the predicted pattern of treatment differences did not appear. In fact, the Prosocial TV - Materials treatment was somewhat lower than the other groups.



Imaginative play. The imaginative play category included imaginative play and role-playing fantasy that occurred alone and with other children. The most frequent subcategory within the combination was cooperative role-playing with peers. The means appear in Table 9. The main effect of treatments was significant. The pattern of means was consistent with the predicted ordering of treatments. The Prosocial TV - Training treatment was highest followed by Prosocial TV - Materials, then Prosocial TV only treatment. The Neutral treatment was lowest. In fact, an examination of the baseline and experimental means indicates an overall decrease in the Neutral treatment and increases in the groups exposed to prosocial television alone or with materials and training added.

Nonverbal interaction with peers. The combined variable included non-verbal interaction with peers and playful aggression. Much of the behavior scored as playful aggression was nonverbal horseplay that was similar in nature to the behaviors scored as positive nonverbal interaction. Examples of the type of behavior scored are friendly face-making, playful roughhousing, or mutual participation in motor activities. A distinction can be made between this category and those discussed previously. The behavior under consideration was characterized not only by the absence of a verbal component, but by its relative simplicity.

There were no consistent effects of treatments on this variable. There was a significant three-way interaction of treatment x sex x structure. The means appear in Table 9. There were no differences among treatments for girls. For boys the differences among treatments formed no readily interpreted pattern.

Assertiveness. Three related categories of behavior were classified as assertive: commands (single variable), demandingness to peers, and verbalization of feeling. These variables were correlated about equally with positive social interaction and aggression. Conceptually they appear to fall somewhere between positive and aggressive forms of peer interactions, suggesting that drawing a dichotomy between prosocial and aggressive behavior oversimplifies what occurs under natural conditions. For these reasons, these variables are described as assertive. The child states directly her or his preferences, wants, and needs in socially acceptable ways while taking steps to be sure they are recognized.

Of particular interest is the suggestion that verbalization of feeling is closely tied to assertiveness in children of this age. In observing the ways in which children talked about feelings and wishes, it became apparent that most statements were characterized by explicit demands, requests and descriptions of preferences. For example, labeling of feelings rarely occurred, but "I want" statements were frequent. Furthermore, both categories correlated with other indices of verbal assertiveness such as commands, requests for objects

and for help.

For commands, demandingness to peers and verbalization of feelings, there were significant interactions of treatment x structure, but no main effects of treatment. The means for all three variables appear in Table 9. In the low structure classes, the Prosocial TV-Materials treatment was highest on all three variables. Examination of the baseline and experimental period means indicates that children in this condition increased on these types of behavior despite the fact that their baseline levels were very high. On commands and demandingness to peers, the Prosocial TV - Training condition was intermediate with the Prosocial TV - only and Neutral conditions being low. On verbalization of feelings, there were no differences among the latter three conditions.

In the high structure classes, there were virtually no differences among treatments. The one exception occurred on verbalization of feeling where the Prosocial TV - Materials treatment was lower than the other three. As will be discussed later, this group had extremely low baseline scores on several variables so comparisons are difficult to make.

Aggression. Total aggression included all categories of interpersonal and object aggression except playful aggression. The main effect of treatments was significant, and there was a trend to an interaction of treatment x structure. The means appear in Table 9. For both structure groups combined the Prosocial TV-only condition was lower than the other three. This pattern was particularly marked in the low structure classrooms. In the low structure classes alone, the Prosocial TV-Materials treatment was also higher on total aggression than the other treatments.

Only the main effect of treatments was significant for hostile aggression. Again, the Prosocial TV-only was lowest, though it was significantly different only from the Prosocial TV - Materials group. The differences were due primarily to the low structure classes

For prosocial aggression, both the main effect of treatment and the interaction of treatment x structure were significant. Overall, the Prosocial TV-only treatment was lower than the other three conditions. Within the low structure classes, the pattern was similar to that for total aggression and hostile aggression that is, the Prosocial TV-only treatment was low and the Prosocial TV-Materials treatment was high.

For the high structure classes, however the Neutral and Prosocial TV-Training were higher than the Prosocial TV-only and Prosocial TV-Materials. This pattern was different from that shown for hostile aggression. The neutral condition was relatively high on both hostile and prosocial aggression and the Prosocial TV-

only group was relatively low on both. The Prosocial TV- Training condition, however, was relatively low on hostile aggression and relatively high on prosocial aggression.

Social interaction with adults. This category indicated spontaneous social interaction with adults (as opposed to teacher-initiated instruction). As has been noted earlier, social interaction with adults was uncorrelated with social interaction with peers for the most part. The treatment x structure interaction was significant. Within the low structure classrooms, the Prosocial TV - Materials treatment was higher than all other conditions. Thus this treatment, which was associated with relatively high levels of both prosocial and aggressive behavior to peers was also associated with high levels of social interaction with adults.

For the high structure classrooms, the Prosocial TV - Training condition and the Prosocial TV - Materials condition were lower than the other two conditions.

Persistence. The means for task persistence appear in Table 9. Although there were trends in the predicted direction, particularly in the high structure classes none of the effects of treatment were significant in the analysis of variance. There was a main effect of structure. Low structure classes were higher on persistence than high structure classes. That is, the difference between these classes evident in the baseline period increased in the experimental period.

Teacher-led instruction. As stated earlier, the amount of teacher-led instruction appeared to be more a function of the teacher's behavior than of changes in the children. Most of this instruction was academically or cognitively oriented. In the baseline period, teacher-led instruction was negatively related to many of the prosocial behaviors of interest in this study, e.g., imaginative play and task persistence. One reason for the negative correlation may have been that there was simply less time and opportunity for these behaviors when children spent much of their time in mandatory instructional activity. Hence it might be expected that the amount of such instruction would decline when the curriculum was re-focused on prosocial behavior, imaginative play, and independent task-oriented behavior.

The main effect of treatment was significant and the interaction of treatment x structure was significant. The means appear in Table 9. Overall the Prosocial TV -Training condition had the lowest level of teacher-led instruction. The Prosocial TV-Materials and Neutral conditions were intermediate. The highest levels of teacher-led instruction occurred in the Prosocial-TV only group. The finding that the lowest level of teacher-led instruction occurred in the Prosocial-TV-Training condition was true for both high and low structure classes. In the low structure classes, however, the Prosocial TV-Materials condition was also low, and the Prosocial-TV-only condition was higher than any other condition. In the high structure

classes, all conditions other than the Prosocial TV training condition were relatively high.

Waiting. Waiting behavior also appeared to be a function more of classroom procedures than of the children's self-control. As long periods of delay where children were not involved in activities appeared to be an undesirable classroom practice, it appeared in retrospect that one might expect decreases rather than increases if teachers became more sensitized to children's needs. Nevertheless, the reliability of this variable was low, and it was the one variable on which observer bias appeared to occur. Perhaps partly for these reasons, there were no significant effects in the analysis of waiting. The means appear in Table 9.

Summary of treatment effects. In this summary, significant differences between each prosocial television treatment group and the Neutral condition will be presented. There were few differences between the Prosocial TV only and the Neutral condition in either type of classroom. For the entire sample, the Prosocial TV only group tended to have lower levels of aggression. The difference was significant for prosocial aggression. The only other difference that occurred was limited to the low structure classes in which the Prosocial TV only group had higher levels of teacher-led instruction.

The effects of the Prosocial TV-Materials treatment varied with classroom structure. In the low structure classes this treatment was associated with high levels of positive social interaction with peers, imaginative play, assertiveness, aggression, and social interaction with adults. They were lower than the Neutral condition on teacher-led instruction. The high structure class assigned to this condition was quite different from the other high structure classes on several baseline variables, so some of the significant findings may be a function of other characteristics in this class. Children in this class had lower levels of positive social interaction with peers, verbalization of feeling, and social interaction with adults than the Neutral condition.

Although the effects associated with the Prosocial TV-Training condition were more pronounced for the low structure classes, many of them occurred across the entire range of structures sampled. For the whole sample children exposed to Prosocial TV with teacher training had higher levels of positive social interaction with peers, and imaginative play and lower levels of teacher-led instruction. In the low structure classes, this condition was also associated with higher levels of demandingness to peers (though not as high as the Prosocial TV materials group but not with increased aggression. In the high structure classes children in the Prosocial TV-Training condition had lower levels of social interaction with adults.

There were no significant effects of any treatment on persistence or waiting.

### Classroom Structure

Throughout the analyses the differences among classrooms were repeated and striking. Although this variable alone was not of interest in planning the study, classroom structure and the variables associated with it in this sample clearly had important effects on many of the prosocial variables under study. In order to interpret these differences, it may be well to review the ways in which the high and low structure classes differed. The high structure classes had teachers who rated lower on warmth and higher on harsh disciplinary practices, they met in large rooms shared by two or three classes, they were predominantly white, and the ratio of boys to girls was imbalanced. In three of the six classes children were re-grouped at the beginning of the experimental period to form more heterogeneous age groups. The low structure classes had teachers who were relatively warm and non-punitive, they met in individual classrooms, they were predominantly black, and most had an even balance of boys to girls.

Classroom structure was not included in analyses of variance of the baseline data, but the intercorrelations with teacher-led instruction provide similar information about the overall differences between high and low structure classes. In the baseline period, teacher-led instruction was negatively related to aggression (particularly hostile aggression), imaginative play, task persistence, and non-verbal interaction with peers.

The adjusted means for those variables on which high and low structure classes differed significantly in the experimental period appear in Table 11. There were main effects of structure on positive

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Insert Table 11 about here

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social interaction with peers and verbal interaction with peers (see Table 10). Children in the high structure classes increased more than those in the low structure classes despite the fact that their initial scores were slightly higher. Significant structure differences occurred for commands and demandingness to peers. Low structure classes manifested more of these behaviors than high structure classes.

On persistence, the initial differences increased in the experimental period primarily because all the high structure classes except those in the Prosocial TV-Training condition dropped considerably in persistence. The low structure classes, which were initially higher remained at approximately the same levels as they demonstrated in the baseline period.

As the structure division was based on teacher led instruction one might expect regression to the mean. Although the high structure classes dropped considerably on this variable, the low structure classes

did not increase consistently. Similarly, on waiting behavior, the initial differences were maintained and, in some instances, increased in the experimental period.

### Group Observations

The scores for the experimental period for circle time, pick up time and rest time were submitted to analyses of covariance of sex x treatment structure with the baseline scores as the covariate. The adjusted means for the three variables divided by treatment and structure appear in Table 12. For circle time, there were no significant effects.

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 Insert Table 12 about here  
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For pick-up time and rest time, the interactions of treatment x structure were significant ( $F = 3.15 \cdot 3, 101 \text{ df } p < .05$ ,  $F = 2.79 \cdot 3, 109 \text{ df } p < .05$  respectively).

On both sets of ratings, those differences among treatments that did occur were limited to the high structure classrooms. In the high structure classes, pickup ratings were higher for the Prosocial TV-Materials and Neutral conditions than for the Prosocial TV-Training condition. This pattern was not predicted. For rest time ratings, a low score indicated more ready obedience of classroom rules than a high score. In the high structure classes, the prosocial TV-materials group had significantly lower scores than the other treatments. As indicated earlier, the high structure Prosocial TV Materials class was sufficiently different from the other high structure classes that these effects cannot be attributed to the treatment alone with any confidence.

The main effects of classroom structure were significant for both pick-up time ( $F = 23.32 \cdot 1, 101 \text{ df } p < .01$ ) and rest time ( $F = 8.31 \cdot 1, 109 \text{ df } p < .01$ ). The high structure classes were higher on pick-up ratings, but had poorer (i.e., higher) rest time ratings than the low structure classes.

### Individual Tests

The data for the motor inhibition reflection-impulsivity helping and delay of gratification measures were collected during the last four weeks of the experimental period and the subsequent four weeks. No testing was possible in one classroom (High Structure-Prosocial TV-Materials), because the center director refused permission to conduct individual tests with the children. As the refusal occurred just before the beginning of the experimental period (when parent permission for testing was being obtained), it was too late to replace the class. Time delays also prevented administration of all tests to all children so the number of subjects for these measures is smaller than for the classroom observations.

### Motor Inhibition

The baseline and experimental scores on the Draw a Line Slowly and Walk Slowly measures were converted to T scores (mean = 50, Standard deviation = 10). The scores for trial 2 (when the child was instructed to go slowly) in the experimental period were submitted to analyses of covariance of sex x treatment x structure with the baseline trial 2 score as the covariate. The means appear in Table 13. This

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 Insert Table 13 about here  
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analysis, however, is only approximate because of one missing cell (High Structure Prosocial TV - Materials).

There were no significant effects on the Draw a Line Slowly measure. On the Walk Slowly measure, the main effect of treatment was of borderline significance ( $F = 2.68$ ; 3, 82 df,  $p < .06$ ). The Prosocial TV-Materials condition was lower than the other three treatments. As there were no overall effects of structure, this difference does not appear to be due to the absence of the high structure class from this condition.

### Reflection-impulsivity

The latency and error scores on the KRISP were converted to T scores. An impulsivity score was calculated by subtracting the T score for latency from the T score for errors for each child. The means appear in Table 13. All three measures were submitted to analysis of covariance of sex x treatment x structure with the baseline score as the covariate. There were no effects of treatment or treatment x structure. The only significant result was a main effect of structure on the latency scores ( $F = 18.16$ ; 1, 82 df,  $p < .01$ ). Children in low structure classes had longer latencies than those in high structure classes. This difference was manifested in a borderline main effect of structure on the impulsivity scores ( $F = 2.75$ ; 1, 82 df,  $p < .10$ ).

### Helping Behavior

The mean frequency, duration, and latency of helping on the collage appear in Table 14. Analyses of variance of sex x treatment x structure were performed on these data with provision for a missing

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 Insert Table 14 about here  
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cell. Again, this provides only approximate results. The main effect of treatments was significant for frequency of helping ( $F = 2.68$ ; 3, 104 df,  $p < .05$ ). The Prosocial TV - Materials condition was associated with

the highest frequency of helping and the Prosocial TV only treatment had the lowest frequency of helping. The Neutral and Prosocial TV only conditions were intermediate.

#### Delay of Gratification

The delay of gratification measure was scored in 15-second intervals. At the end of each 15-second interval, the observer checked one of three categories: child touching play materials, child looking at play materials without touching, child looking away from task. The amount of time spent touching and looking at the play materials was highly related to the total time elapsing before the child terminated the task by ringing the bell. Therefore the latter measure was the only one analyzed. The distribution of scores was bimodal. Of 99 children tested, 23 terminated the task immediately (within 15 seconds) and 57 waited the entire ten minutes. Of the remaining 19 subjects, 13 terminated the task before 5 minutes had elapsed. Therefore, the delay of gratification scores were analyzed by  $\chi^2$  tests in which scores were divided into three categories (Low = less than 15 seconds, Medium = 15 seconds to 9 minutes, 45 seconds, High = 10 minutes) and into two categories (the low and medium levels above were combined and compared to the high levels). The frequencies appear in Table 15. In both analyses, the

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 Insert Table 15 about here  
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effects of treatment were non-significant.

Classroom structure was significantly related to delay of gratification. High structure classes were more likely to wait the entire 10 minutes than low structure classes ( $\chi^2 = 7.36, 1 \text{ df } p < .01$ ). The frequencies appear in Table 15.

Examination of frequencies within treatments for high and low structure classes separately suggested that there were no treatment effects within either type of class.

Summary of treatment effects for group observations and individual measures. There were no consistent treatment differences on the group observations of circle time, pick-up time, and rest time. All of these measures were intended to tap self regulation in the form of conformity to classroom rules and procedures. On the individual tests the only treatment effects occurred for the helping measure. The Prosocial TV-Materials condition had the highest helping scores and the Prosocial TV only had the lowest scores. There were no treatment effects on motor inhibition, reflection-impulsivity or delay of gratification.

These findings are consistent with the fact that treatment effects in the individual observations appeared for social behavior but not for measures of self regulation.



Classroom structure was significantly related to pick-up ratings, rest time scores, latency, on the reflection-impulsivity measure, and delay of gratification. High structure classes had higher rule obedience on pick-up time and higher delay of gratification. Low structure classes were scored as more conforming in rest time, and their latencies on the reflection-impulsivity measure were longer.

## Discussion

### Patterns of Naturalistic Behavior

Before discussing treatment effects, it may be useful to examine the patterns of behavior which occurred in the different natural settings observed in this study. These patterns shed some light on the problems that may arise in viewing prosocial behavior in children. Indeed, the results of this study like those of earlier studies (e.g., Friedrich & Stein, 1973; Murphy 1937; Wright, 1960) indicate that one cannot draw a dichotomy between positive social behaviors and aggression. In free play positive social interactions with peers are correlated with aggression.

Perhaps more interesting, we have identified a set of verbal behaviors which would could be characterized as assertive which are distinct from verbal aggression. These assertive behaviors are more closely related to positive social interaction than are physical and verbal aggression. They appear to be prosocial as they represent adaptive and socially acceptable ways of dealing with conflict. The naive notion that prosocial interaction is characterized by passivity and constant concern for others is contradicted by this conceptualization. The prosocial child is not a "goody-goody." For the preschool child assertive behavior, although associated with positive forms of interaction does not appear to be clearly differentiated from socially unacceptable forms of aggression.

### Effects of Prosocial Television, Materials and Training.

Prosocial television by itself. In contrast to the earlier study (Friedrich & Stein, 1973) in which viewing alone was associated with a number of increases in prosocial behavior, the children in the prosocial television only condition did not differ from those in the neutral condition on these behaviors. There was a slight trend toward increased imaginative play. The one area in which the prosocial television only condition differed was aggression children in this condition had lower levels of aggression than the neutral treatment. Although differences in aggressive behavior were not found in our earlier study at least one other study using "Mr. Rogers Neighborhood" did find reduced aggression following viewing (Shirley, 1974). In the present study, this finding cannot be attributed solely to the effects of television. The other groups who saw prosocial television had relatively high levels of aggression. In interpreting the aggression

differences, the interaction of television, initial level of aggression and classroom structure seems to be important.

There are many striking differences in the characteristics of the children, the physical settings and classroom procedures and educational philosophy between our earlier study and the present study.

First, the population in the present study was urban, poor and ethnically mixed. The population in the earlier study was from a small city and surrounding rural areas. They were more economically advantaged and predominantly white. Second, the preschool settings differed in a number of ways: In the earlier study the physical settings in the university nursery school provided more space facilities and materials both indoors and outdoors. In addition, viewing was conducted in smaller groups in quieter, less distracting settings. The teacher-child ratio was not only smaller, but the teachers were university instructors and the assistants were graduate and undergraduate students. Their training emphasized the importance of social behavior and teaching cognitive skills through individual and small group instruction. Despite the obvious differences, their procedures appear more similar to those in the low structure classrooms than in the high structure classrooms in the present study. The overall effects of prosocial television were more pronounced in the low structure classes than in the high structure classes and the pattern of effects were more similar to those in the earlier study. The differences between the urban high and low structure classrooms as well as differences in findings between the two studies suggest that classroom structure is an important determinant of the influence of prosocial television.

In this context, it is noteworthy that the classes in the prosocial television only condition were the most highly structured in the experimental period. The high levels of structure in these groups may have reduced the possibility that television would affect positive social behavior. In addition high structure in the baseline was associated with low aggression. The low aggression in this condition may have resulted either from the high structure in the experimental period or from the interaction of structure with exposure to prosocial television.

In the present study, it was necessary to supplement prosocial television with materials or curriculum which related to the program content in order to produce changes in prosocial behavior. Obviously television is one of many influences in group behavior. In the present study classes had been meeting on an everyday basis for several months before the experimental treatments were introduced. Stable patterns of interaction may have developed whereas in the earlier study the treatments were introduced a few weeks after the classes were formed. In addition it was not possible to control for classroom differences by assigning different treatments within classrooms and there was more variability among teachers than in the

university nursery school. Under these conditions, it appears that prosocial television must be enhanced with additional environmental support in order to override the powerful effects of existing group climate and teacher differences.

An overview of our results and those of others (e.g., Shirley, 1974; Singer & Singer, 1974) suggest a number of variables that may be important in determining when viewing Mister Rogers Neighborhood in a group setting is likely to produce changes in children's behavior and when it is not likely to do so without environmental supplements. There is no way to determine from present findings the relative salience of each, but the following have been identified as possibilities: 1) characteristics of the children; 2) physical setting of the classroom; 3) physical arrangements for television viewing; 4) the compatibility of teacher philosophy with the program; 5) the methods of teacher instruction, particularly the amount of structured activity; 6) teacher-child ratio; 7) stability of group climate and patterns of behavior at the time television is introduced.

Prosocial television and related freeplay materials. The importance of group structure is again apparent in assessing the effects of prosocial television supplemented by freeplay materials. The high structure classroom assigned to this treatment had the highest levels of teacher-led instruction in the entire sample. There were no consistent behavioral changes in that class and those differences that did occur appear to be more a function of extreme differences in the baseline period rather than treatment effects.

The addition of materials designed to stimulate rehearsal of program content and to provide environmental cues related to the program was associated with prosocial behavior in the two low structure classrooms in this condition. In the experimental period children in this condition, compared to the neutral groups, had high levels of positive social interaction with peers, imaginative play, assertive behavior, positive social interaction with adults and helping a peer in the individual test situation.

While children in this condition showed high levels of prosocial behavior, they also showed the highest levels of aggression, both hostile and prosocial. One reason for the increased aggression may have been that these children were initially highly aggressive and socially active, and they were accustomed to a fair amount of freedom to choose activities in the classroom. In addition the setting in which television was viewed during the early part of the experimental period was somewhat crowded and filled with distractions. Perhaps for these reasons, the children in these classes reacted somewhat negatively to required television viewing. Although changes in group size and physical setting for the television viewing were made once the problem became apparent the teachers felt uncomfortable about imposing viewing and were somewhat antagonistic to the procedure.

The aggressive reactions of the children in this condition may, therefore, have been partially a function of their initial predisposition to aggressive behavior and their negative feelings about an enforced activity in the context where there were few required activities. The teachers were apparently not sufficiently involved in the philosophy of the program to counteract these reactions.

Nevertheless, it is interesting that the prosocial messages of the program and/or the stimulation provided by the materials apparently also had positive effects. The design of the study does not permit one to determine whether the effects were due primarily to the materials, the television, or the combination of the two. In addition to the fact that the effects of the play materials without the television were not assessed the differences in structure between the condition that included materials and the prosocial television only condition make it difficult to determine the relative importance of the television viewing in the materials condition.

These results support the prediction that television viewing combined with environmental cues and rehearsal materials that are designed to be used without adult direction can stimulate many categories of prosocial behavior. Although there are certainly many differences between classroom viewing and home viewing, the findings suggest the potential value of prosocial television accompanied by well designed play materials in the home or in small group settings such as day care homes where adults are untrained in educational procedures.

Prosocial television and training. The most consistent and clear-cut effects on positive social interaction with peers and imaginative play occurred in the condition that combined prosocial television, related play materials and teacher training and involvement. Although the effects were greater in the low structure classes, the pattern was sufficiently pronounced in both high and low structure classes to produce overall treatment differences. In the low structure classes assertive behavior was also higher in the training condition than the neutral group. By contrast with the prosocial TV - materials condition, however, aggression did not increase.

These findings support the prediction that prosocial behavior will be most affected by the combination of television and active participation by the teachers and children in rehearsal activities. The activities were structured to provide opportunities for generalization and extension of the program themes to everyday classroom experiences. They were also designed to promote warm positive interactions between children and adults. The training of the teachers was intended to sensitize them to the recognition and reinforcement of prosocial behavior. The combination of these

features with television and independent play materials was apparently powerful enough to overcome the effects of existing group climates and to operate across the wide variety of teacher methods, settings and child characteristics represented in this sample.

Although the prosocial effects were strongest in the training condition, one of the major differences from the prosocial television and materials group was the absence of high levels of aggression. The importance of this difference is revealed by an examination of one classroom in the training condition which was equivalent to those in the prosocial television - materials condition in structure, initial levels of aggression, and initial reactions to required television viewing. The training group did not increase in aggression. It appeared that the teacher in this classroom had more positive attitudes to the television programs and greater awareness of the prosocial themes. This may have enabled her to facilitate the television viewing process and to respond more readily to prosocial behavior in the classroom.

#### Effects of television on self regulation and social behavior.

The most pronounced effects of all experimental treatments occurred for social behavior to peers. By contrast there were no consistent effects on any of the measures of self regulation. This pattern is consistent with the earlier study where increases in prosocial interpersonal behavior were manifested by the children from lower social class backgrounds. In that study persistence increased for the entire sample but the effects were strongest for children who were above the mean in intelligence. There were also some increases in rule obedience, a category that was comparable to accepting responsibility in the present study.

The contrast between the effects on social behavior and self-regulation suggests that self-regulatory behavior may be more difficult to convey to young children than social interaction skills. This notion is supported by findings showing low frequencies of many types of self-regulation in natural behavior (e.g., Friedrich & Stein 1973). In experimental modeling studies, self-regulation is generally more difficult to produce than social behavior (Hoffman 1970). Perhaps self regulation requires greater maturity and perhaps it is less inherently reinforcing than positive social behavior.

Another possible reason why there were no treatment effects on self regulation is the very powerful situational influences on many of these categories of behavior. Classroom structure was highly related to most categories intended to measure self-regulation. Persistence was considerably higher in the low structure classes than in the high structure classes and the difference increased in the experimental period. This difference may be due to the greater emphasis on individual and small group instruction with warm, accepting

adults. It appears that this experience with independent task orientation may also have affected responses to the measure of reflectivity. Children from low structure classes had longer latencies on this measure. Waiting behavior appeared to be primarily determined by classroom procedures i.e. less waiting was required in low structure classes. Both the group observations and the individual tests were designed to control some aspects of situational variability, but despite these efforts, classroom structure was the major variable related to these measures. The pick-up time ratings, intended to measure accepting responsibility in a group, appeared to reveal different levels of expectations and enforcement by teachers. The more structured the classroom, the higher the pick-up ratings. High structure classes also tended to be higher on the individual task measuring delay of gratification. Most of the children in the high structure classes waited the maximum length of time on that task. It appears that children's experiences with waiting in the classroom carried over to this individual setting with an adult present.

The rest time ratings present a unique problem. The score assigned to a child appears to reflect the amount of admonishment by a teacher to a child. Thus, the lower scores in the low structure group may not reflect absolute differences in children's behavior, but differences in teachers' responses to perceived rule breaking. The observer ratings of differences in disciplinary techniques are consistent with this interpretation.

Situational variables, particularly classroom structure, have been important in the results throughout this study. In general treatment effects were more likely to occur in low structure groups than in high structure groups. This suggests the tentative conclusion that the atmosphere and procedures in the low structure classrooms were more conducive to the acquisition of prosocial behavior through the procedures used in this study. However, the conclusion that high structure, in itself interferes with such procedures is not warranted. There were a number of other dimensions on which high and low structure classes differed. In addition, among high structure classrooms assigned to different treatments, there was higher variability on initial levels of teacher led instruction, physical facilities and sex ratios within classes. Thus, treatment effects could have been masked.

#### Implications for Daycare and Early Childhood Education.

One of the major purposes of this study was to determine whether prosocial television and related curriculum materials could be useful in daycare and educational programs for young children especially the disadvantaged. The results seem to us to be not only encouraging but impressive given the wide variety of classroom and teacher characteristics. As in much educational

research, these characteristics were certainly influential. But in many instances the treatments were sufficiently robust to produce significant positive changes. The teachers, children, and physical facilities were typical of urban early childhood education programs. Both television and curriculum materials were introduced as a part of ongoing classroom activity by the teachers. No additional personnel or space were required. It seems, therefore, that prosocial television and curriculum have potential value for enhancing the development of the whole child.

#### Summary

The study described here deals with a twofold problem to determine whether a television program designed to enhance personal, social and emotional development can have positive effects on children's behavior and to determine what elements in the child's environment may combine with exposure to such a program to produce the greatest positive effects. A related objective was to provide information that could be useful in the planning of daycare and early childhood education programs. Two components of the environment were studied: training of the adult caregivers to implement materials and concepts related to the programs and arrangement of the physical environment to increase the likelihood that the child will use material from the program in his everyday behavior. The program selected for study was "Misterogers' Neighborhood." The group settings were early childhood education programs for urban low income children.

The dependent variables studied fall in four major categories: 1) positive social interaction with peers---cooperation, nurturance, helping, sharing, understanding, and verbalization of feelings; 2) self-regulation and achievement behavior---task persistence, freedom from distraction, willingness to tolerate delay, spontaneous acceptance of rules, independence and autonomy; 3) creative fantasy and imaginative play, and 4) assertiveness and aggression. These variables were assessed in a natural setting, as well as in the controlled conditions of the laboratory.

Subjects for the study were 141 children enrolled in urban Head Start programs. Baseline data were collected over a three-month period. Whole classrooms were then assigned to one of four experimental treatments: 1) prosocial television with teacher training for rehearsal activities and relevant play materials in the classroom, 2) prosocial television with relevant play materials in the classroom, 3) prosocial television with irrelevant play materials in the classroom, or 4) neutral films with irrelevant play materials in the classroom. Three classes were assigned to each condition except the Prosocial TV - Training condition to which four classes were assigned. A total of 20 Mr. Rogers' or neutral films were shown to each class during the eight-week experimental period.

The play materials relevant to the prosocial television were designed to provide cues and opportunity for rehearsing the program content in individual or small group play. There were dramatic play materials, craft materials, puzzles, books, records, and posters, many directly from "Mr. Rogers' Neighborhood." The irrelevant materials were books, games, and records that were as devoid of prosocial content as possible. In the Prosocial TV Training condition, the teachers and aids were given a twelve-hour course and supplied with additional curriculum materials to use in circle time activities. The course was designed to increase the teachers' awareness and recognition of prosocial behavior in children and to provide them with specific means of eliciting and reinforcing prosocial behavior.

The major dependent variables were derived from observations of natural behavior in ongoing classroom activities. The following general categories were scored: positive social interaction with peers, imaginative play, assertiveness, aggression, social interaction with adults, task persistence, teacher-led instruction, and waiting patiently. In addition, other aspects of self-regulation (accepting responsibility and rule obedience) were observed during circle time, pick-up time, and rest time. Individual measures of motor inhibition, reflection-impulsivity, helping behavior and delay of gratification were administered outside the classroom.

Large differences among classes in the baseline period led to a stratification of classes on the basis of the amount of structured group learning activities that were regularly employed by the teachers. Classes were divided into two groups: high and low structure, on the basis of baseline observations of the amount of teacher-led instruction and observer ratings of classroom structure. Analyses of covariance of sex  $\times$  treatment  $\times$  structure with the baseline score as the covariate were carried out for each dependent variable.

Prosocial television alone produced few behavioral differences from the neutral treatment. The group who saw prosocial television with irrelevant materials had lower levels of aggression particularly prosocial aggression, than the neutral treatment. As this difference did not occur for other groups exposed to prosocial television, it cannot be attributed to television effects alone. In the low structure classes, they had slightly higher levels of imaginative play.

The effects of prosocial television accompanied by relevant play materials varied with classroom structure. In the low structure classes, this treatment was associated with high levels of positive social interaction with peers, imaginative play, assertiveness, aggression, and social interaction with adults and helping a peer in an individual test situation. They were lower in teacher-led instruction. The high structure class assigned to this treatment was quite different from the other high structure classes on several baseline variables, so some of the significant findings may be a



function of factors other than the treatment. Children in this class had lower levels of positive social interaction with peers, verbalization of feeling, and social interaction with adults than the high structure neutral condition.

Although the effects of prosocial television accompanied by relevant play materials and teacher training were more pronounced for the low structure classes, many of them occurred across the entire sample. For the whole sample, children in this condition had higher levels of positive social interaction with peers and imaginative play and lower levels of teacher-led instruction than the neutral condition. In the low structure classes, this condition was also associated with higher levels of assertive behavior, but not with aggression. In the high structure classes, children in the Prosocial TV - Training condition had lower levels of social interaction with adults than the neutral treatment.

Although there was a slight trend to higher persistence in the Prosocial TV - Training condition it was not significant. There were no condition differences in waiting behavior or in any of the observations of accepting responsibility and rule obedience, nor were there any consistent treatment effects on motor inhibition, reflection-impulsivity or delay or gratification in the individual test situations.

Throughout the analyses, classroom structure was an important variable. Treatment effects were stronger in low structure classes than in high structure classes. In the baseline period, high structure classes had lower levels of imaginative play non-verbal interaction with peers, aggression (especially hostile aggression) and task persistence than the low structure classes. In the experimental period, regardless of treatment, children in high structure classes increased in positive social interactions with peers more than those in low structure classes. High structure classes had higher levels of rule obedience in pick-up time and higher delay of gratification scores in the experimental test situation. Low structure classes had higher levels of task persistence, assertiveness, conformity in rest time, and latencies on the reflection-impulsivity measure even when initial differences were controlled.

The study has implications for the use of prosocial television and related curriculum materials in day care and educational programs for young children, particularly the economically disadvantaged. As in much educational research teacher and classroom characteristics were important variables. But, in many instances the treatments were sufficiently robust to yield changes despite the wide variation in teacher characteristics and classroom procedures. The teachers, children, and physical facilities were typical of urban, early childhood education programs. Both television and curriculum materials were introduced as a part of ongoing classroom activity. No special personnel or space were required. It seems, therefore, that prosocial television and curriculum have potential value for enhancing the development of young children.

Table 1

## Prosocial Television Series with Summary of Themes

Name of Series	Number of programs	Themes
Rocket Series	3	Persistence Delay of gratification Self-regulating behavior: accepting rules, learning to wait, learning to control aggressive impulses Recognition and labeling of feelings
Lady Elaine-Henrietta Conflict	2	Self-perception: uniqueness of each individual, acceptance of differences in self and others
X the Owl - Corney Conflict	2	Self-regulation: learning to accept rules, learning to wait, coping with frustration, learning to control aggressive impulses, finding alternative course of action. Recognition and labeling of feelings: self and others Helping Verbalizing feelings
Neighborhood Switch	4	Helping, sharing, cooperation Recognition and labeling of feelings: self and others Self regulation: learning to accept rules, coping with frustration, learning to control aggressive impulses. Persistence

Table 1 (continued)

Henrietta -  
Collette

4<sup>a</sup>

Self-perception: uniqueness  
of each individual, acceptance  
of differences in self and  
others

Helping, sharing, cooperation

Recognition and labeling of  
feelings: self and others

Daniel - Panda  
Birthday

3

Helping, sharing cooperation

Recognition and labeling of  
feelings: self and others

Verbalization of feelings:  
sadness

Rocking Throne

2

Delay of gratification

Self-control

Understanding feelings of others

Verbalizing feelings

a. Shown over two weeks, two programs each week.

## Prosocial Materials

Materials for teaching helping behavior to young children were organized on two levels: (1) free play, for individuals or for small groups to use together, and (2) structured materials, for children to use with adults.

I. Free Play

A. Materials which children could use individually or in small groups (these were to be available for use during free play every day after having first been introduced except for items 10 and 11):

1. Books: Leo the Late Bloomer

All the Animals were Angry

The Matter of Mittens

The Elves, the Shoemaker, and the Shoemaker's Wife

(Note for training groups: The following two books were available throughout, without being used at Circle Time:

Speedy Delivery

Rogers' Songbook)

2. Records: To be used whenever records would usually be used--free play, rest time, snack or lunch time, activity time, etc.:

5 Rogers Long Play

2 Rogers 45 rpm

3. Picture puppets: Characters appearing in Rogers' films.4. Hand puppets: 3 boys

3 girls

5. Stand-up figures: To encourage generalizing themes.6. Backdrops: Large folding pictures to use with stand-up figures and picture puppets--to be used on low tables rather than the floor.

7. Flannel board and pieces representing all Rogers' characters and props: Best used standing on the floor against something solid.
  - \*8. Lotto Games: These are based on two of the songs which are recorded on the cassettes--Hallelujah I'm a Growin' and How do You Feel Today Friend?
  - \*9. Children's picture books: To accompany 3 songs and 2 chants recorded on the cassettes--Try Again, Sometimes I Feel So Sad, It's Great to be Different, What do You do With the Mad?, Here are My Hands.
  10. Wheels to use for dramatic play revolving around two of the Rogers' series: Rocket Series and Daniel-Panda Birthday Series.
  11. Collage materials: Training groups--save for specific times called for in script; other groups--use at own discretion.
- B. Materials for cooperative play:
1. Mockup of the castle from the Neighborhood of Make Believe: To hang on wall in an area where dramatic play can take place.
  2. Dressup clothes: Large boxes or shelves should be available for storage of these items in the dramatic play area:
    - a. Masks for dramatizing Misterogers, Lady Aberlin, Robert Troll, Chef Brockett, Handiman Negri, Francois Clemmons.
    - b. Capes for dramatizing King Friday and Queen Sara.
    - c. Gaily colored fabrics for use as capes or tunics to dramatize other characters.
  3. Materials for making crowns and hats.
  4. Rogers' posters: Hang wherever most suitable to stimulate interest, encourage conversation, and dramatic play.
  5. Materials for making telescopes and telecans: To be used in the Rocket, Daniel-Panda Birthday, and NOM Switch Series.

6. Materials for making rhythm instruments: Drums, shakers, and kazoos--  
to use at Circle time.
7. Pictures of trolley from "Around The Neighborhood" envelopes to create  
a trolley by pasting them on the sides of shoe boxes.

## II. Structured Materials

### A. Twenty films (14 to 20 minutes long):

1. Mechanics of viewing: Darkening the room  
Physical arrangements--chairs, ventilation  
Timing--meet bathroom and thirst needs first  
Teacher's role in encouraging children to  
participate and helping them to maintain  
interest

### \*B. Verbal Labeling Books (these were to be made available to the children after they were first read during Circle Time):

1. The teacher reads these books to the children at circle time. Following each story she tries to elicit from the children the feelings that were described in the various incidents. She then repeats the correct responses, or indicates them if the children have not.
2. The rehearsal questions after each story could be expanded to ask children how they feel when they are the givers of help, and when they are the receivers of help.

### \*C. Scripts to use with puppets:

1. As the teacher tells the story with the puppets, she encourages the children to repeat the lines after her, using their own puppets.
2. These scripts can be expanded to enable the child to generate more of his own content.

### \*D. Cassettes and Accompanying Teacher's Books (two chants and six songs are recorded):

1. Directions for introducing the songs and the accompanying illustration books appear in the Teacher's Manual. We hope the

children will enjoy the songs and chants, and learn them well enough that they will be able to use them to help themselves deal with uncomfortable feelings and difficult situations.

\*E. Games: Described in Teacher's Manual.

\*Only the training groups received these materials.

## Table 3

## Irrelevant Materials

Books

Chicken Soup with Rice  
Amelia Bedelia  
Cricket in a Thicket  
Black is Beautiful  
The Snowy Day  
Whistle for Willie  
ABC of Cars and Trucks  
The Very Little Boy  
Gilberto and the Wind

Games

Matcub Tens Blocs; 100 assorted  
Colorforms  
Jumbolino  
The World About Us Lotto  
Object Lotto  
Build a Picture  
Color Cubes  
Mailman Puzzle  
School Patrol Puzzle

Records

Seasons for Singing  
You Sing a Song and I'll Sing a Song  
Little White Duck  
Babar, Songs and Stories



Table 4

Classroom Characteristics in Each  
Experimental Treatment

	Conditions			
	Neutral	Prosocial TV only	Prosocial TV Materials	Prosocial TV Training
Number males				
Classroom 1	5	3	6	5
2	5	3	7	7
3	3	3	4	9
4				10
Number females				
1	6	4	4	8
2	8	3	7	5
3	3	5	8	4
4				4
Center				
1	A	B	A	A
2	B	E	A	B
3	E	E	C	D
4				D
Mean teacher warmth (ratings)				
1	0.4	2.8	2.0	3.0
2	2.8	0.4	1.0	2.6
3	0.4	0.4	0.6	-1.3
4				-1.3
Mean teacher structure (ratings)				
1	3.2	2.3	3.0	2.3
2	3.9	4.0	3.0	2.8
3	4.0	4.0	5.0	3.7
4				3.7
Baseline observation of teacher led instruction				
1	.045	.067	.060	.050
2	.036	.020	.025	.046
3	.119	.023	.166	.079
4				.073

Table 5

## Summary of Observations

## a = Aggression

aph = physical aggression  
 av = verbal aggression  
 anv = non-verbal aggression  
 ao = object aggression  
 apl = playful aggression  
 at = tattling  
 ad = defending property non-aggressively  
 ac = loud, angry commands

## e = Verbalization of Feeling

el = labeling feelings  
 ew = "I want" "I don't want"  
 en = non-verbalization

## u = Understanding Others

ur = giving reasons for own behavior  
 us = showing consideration and attempts to understand others  
 uc = comfort, sympathy, affection, praise  
 up = going against other's wishes  
 ua = attending to distress  
 uq = questing--asking for materials or objects

## r = Self-regulation

rt = tolerance of delay  
 ra = accepting responsibility  
 re = rule enforcement  
 rd = rule disobedience

## i = Positive Social Interaction

it = teacher led cooperation  
 ic = cooperation  
 ii = initiating interaction  
 ih = helping and sharing  
 ia = asking for help  
 if = suggesting alternatives social interaction  
 is = spoken (verbal)  
 in = non-verbal

## p = Persistence

pc = continually staying with an activity  
 pd = persistence when having difficulty with something

## n = Independence

ni = after indicating need for help  
 nr = refusing help

## f = Fantasy

fr = role playing alone  
 fc = collaborative (reciprocal) taking of roles  
 fi = imaginative

## b - bs = brings recognition to self

## Modifiers

neg = negative, the reverse of the behavior described in the category

1 = low intensity, minimal

3 = high intensity

## Objects

A = adult

C = child

CS = children

B = both adult and child

O = none

## Consequences

+SC = positive social from child

+ST = positive social from adult

-SC = negative social from child

-ST = negative social from adult

+M = material gain

-M = material loss

O = no clear consequences

Table 6

## Definitions of Combined Variables for Individual Observations.

Name of variable	Individual categories included
1. Verbal interaction with peers	is - c (social interaction with peers) bs - c (brings attention to self-peer object) ur (understanding others) us (showing consideration) uc (comfort, sympathy)
2. Prosocial behavior to peers	ic (cooperation with peer) ii-c (initiating interaction with peer) ih-c (helping peer) if (finding alternatives) ur (understanding others) us (showing consideration) uc (comfort, sympathy) fc (collaborative role-taking)
3. Social behavior to peers	All categories in prosocial behavior to peers plus is - c (social interaction with peer) bs - c (brings attention to self - peer object)
4. Imaginative play	fc (collaborative role taking) fr (role playing fantasy) fi - c (imaginative play with peer) fi - o (imaginative play alone)
5. Nonverbal interaction with peers	in - c (nonverbal interaction with peers) apl (playful aggression)
6. Demandingness to peers	ia - c (asking for help from peer) ac (commands) av (verbal aggression) ew - c (saying "I want" to peer) el - c (labeling feelings to peer) uq - c (asking for objects to peer)
7. Verbalization of feeling	ac (commands) ur (understanding others) us (showing consideration) uc (comfort, sympathy) ua (attending to distress) uq - c (asking for objects to peer) uq - a (asking for objects to adults) ew - c (saying "I want" to peers) re (rule enforcement) ia - c (asking for help to peer) bs - c (brings attention to self - peer object)

8. Total aggression	All aggression categories except apl (playful aggression)
9. Hostile aggression	aph (physical aggression) av (verbal aggression) anv (nonverbal aggression)
10. Prosocial aggression	at (tattling) ad (defending property) ac (commands) re (rule enforcement)
11. Social interaction with adults	is - a (social interaction with adult) bs - a (brings attention to self-adult object) uq - a (asking for object to adult) ii - a (initiating interaction with adult) ia - a (asking for help to adult) el - a (labeling feelings to adult) fi - a (imaginative play with adult) ew - a (saying "I want" to an adult)
12. Persistence	pc (concentration on task) pd (overcoming obstacles)

Table 7

## Observer Reliability

Variable	Number of times both observers scored	Number of times second observer scored different category	Number of times second observer gave no score	Percent agreement <sup>a</sup>
Positive social interaction (is)	35	39	30	.39
Verbal interaction with peers	99	58	81	.50
Prosocial behavior to peers	188	92	130	.54
Social behavior to peers	292	97	188	.62
Imaginative play	95	55	42	.58
Non-verbal interaction with peers	13	12	17	.39
Commands (ac)	33	19	33	.52
Demandingness to peers	91	36	77	.55
Verbalization of feeling	156	48	127	.70
Total aggression	129	31	96	.62
Hostile aggression	50	33	35	.50
Prosocial aggression	57	32	48	.50
Social interaction with adults	160	58	134	.56
Persistence	110	31	70	.63
Teacher-led instruction (it)	60	36	28	.55
Waiting (rt)	14	2	48	.35

a. Calculated by formula:  $\frac{2 \times \text{number agreements}}{\text{Total number scores for both observers}}$

Table 8

## Intercorrelations of Individual Observation Variables in Baseline Period

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Positive social interaction with peers		.61	.36	.62	.19	.21	.36	.07	.13	.33	.39	.43	.23	.19	.33	-.14	-.24	.05	.26
2. Verbal interaction with peers	.53		.72	.32	.21	.77	.07	.06	.40	.42	.75	.31	.16	.42	.01	-.34	.11	.23	
3. Prosocial behavior to peers	.93	.93		.71	.43	.52	.53	.09	.45	.46	.59	.44	.30	.44	.04	.25	-.22	.37	
4. Social behavior to peers				.64	.34	.52	.41	.36	.45	.50	.62	.43	.27	.43	-.14	.32	-.13	.02	
5. Cooperation				.24	.23		.14	.05	.39	.35	.42	.22	.19	.31	-.13	-.17	-.11	.03	
6. Helping peers						.17	.07	.22	.39	.24	.27	.32	.22	.32	.01	-.14	-.16	.22	
7. Understanding others							.07	.22	.27	.26	.69	.21	.10	.31	.13	-.31	.16	.13	
8. Imaginative play							.04	.04	.27	.26	.69	.21	.10	.31	.13	-.31	.16	.13	
9. Nonverbal interaction with peers							-.05		.13	.24	.12	.27	.25	.17	.01	-.22	.41	.05	
10. Commands									.04	.07	.03	.25	.12	.03	.22	.02	-.14	.14	
11. Demandingness to peers									.27	.76	.60	.36	.83	-.02	.12	-.12	.13		
12. Verbalization of feeling									.70	.71	.71	.53	.77	-.03	-.14	-.16	.20		
13. Total aggression											.49	.22	.73	.13	-.27	.09	.05		
14. Hostile aggression												.87	.73	.03	-.24	.29			
15. Prosocial aggression													.39	.02	-.12	-.22	.26		
16. Social interaction with adults														.03	-.16	.13	.17		
17. Persistence																		.24	.32
18. Teacher-led instruction																			
19. Waiting																			.22

Note Correlations of .13 or higher are significant at  $p < .05$  with  $N = 155$ . Correlation of .19 or greater are significant at  $p < .01$ . Correlations that are underlined are based on non-overlapping categories.

Table 9

Means for Baseline and Experimental Periods and Adjusted Means for Experimental Period for Individual Observations Divided by Treatment and Classroom Structure

Variable	Structure	Time Period	Means				Adjusted Means			
			Neutral	Pro-social TV only	Pro-social TV-Materials	Pro-social TV-Training	Neutral	Pro-social TV only	Pro-social TV-Materials	Pro-social TV-Training
Positive social interaction with peers	High	Base	.015	.028	.014	.031	.039 <sup>ab</sup>	.038 <sup>ab</sup>	.029 <sup>a</sup>	.049 <sup>b</sup>
		Exp	.036	.042	.025	.053				
	Low	Base	.017	.011	.020	.021	.017 <sup>a</sup>	.018 <sup>ab</sup>	.030 <sup>b</sup>	.035 <sup>b</sup>
		Exp	.015	.014	.029	.034				
	All	Base	.016	.020	.017	.026	.028 <sup>a</sup>	.028 <sup>a</sup>	.030 <sup>a</sup>	.042 <sup>b</sup>
		Exp	.025	.028	.027	.044				
Verbal interaction with peers	High	Base	.039	.067	.023	.064	.088 <sup>a</sup>	.076 <sup>ab</sup>	.050 <sup>b</sup>	.078 <sup>a</sup>
		Exp	.079	.094	.037	.086				
	Low	Base	.034	.027	.046	.037	.047 <sup>a</sup>	.049 <sup>ab</sup>	.069 <sup>b</sup>	.069 <sup>b</sup>
		Exp	.042	.040	.070	.063				
	All	Base	.037	.047	.035	.051	.069	.069	.060	.073
		Exp	.061	.067	.054	.075				
Imaginative play	High	Base	.022	.033	.016	.052	.025	.034	.029	.050
		Exp	.029	.032	.022	.051				
	Low	Base	.038	.020	.062	.045	.013	.038	.051	.045
		Exp	.017	.032	.054	.045				
	All	Base	.030	.027	.036	.049	.022 <sup>a</sup>	.036 <sup>ab</sup>	.040 <sup>b</sup>	.048 <sup>b</sup>
		Exp	.023	.032	.038	.048				
Non-verbal interaction with peers	High	Base	.013	.021	.021	.025	.022	.035	.027	.032
		Exp	.024	.033	.029	.034				
	Low	Base	.030	.052	.023	.041	.041	.033	.024	.031
		Exp	.038	.039	.022	.033				
	All	Base	.024	.036	.022	.033	.031	.034	.025	.031
		Exp	.031	.036	.025	.032				

Table 9 (continued)

Variable	Structure	Time Period	Means				Adjusted Means			
			N	P	P	P	N	P	P	P
Commands	High	Base	.0016	.022	.006	.017				
		Exp	.020	.014	.011	.022	.024	.014	.015	.023
	Low	Base	.023	.011	.029	.024				
		Exp	.020	.017	.038	.027	.019 <sup>a</sup>	.017 <sup>a</sup>	.036 <sup>b</sup>	.026 <sup>a</sup>
	All	Base	.019	.016	.017	.020				
		Exp	.020	.015	.024	.024	.022 <sup>ab</sup>	.016 <sup>a</sup>	.025 <sup>b</sup>	.024 <sup>b</sup>
Demand- ingness to peers	High	Base	.025	.033	.014	.029				
		Exp	.045	.030	.025	.038	.047 <sup>a</sup>	.029 <sup>a</sup>	.032 <sup>a</sup>	.039 <sup>a</sup>
	Low	Base	.035	.022	.047	.050				
		Exp	.034	.026	.071	.055	.033 <sup>c</sup>	.029 <sup>c</sup>	.066 <sup>a</sup>	.049 <sup>b</sup>
	All	Base	.030	.027	.030	.039				
		Exp	.039	.029	.043	.046	.040 <sup>ab</sup>	.029 <sup>b</sup>	.049 <sup>b</sup>	.044 <sup>b</sup>
Verbaliza- tion of feel- ing	High	Base	.061	.085	.024	.068				
		Exp	.095	.095	.033	.075	.099 <sup>a</sup>	.082 <sup>a</sup>	.047 <sup>b</sup>	.075 <sup>a</sup>
	Low	Base	.058	.024	.079	.061				
		Exp	.070	.061	.107	.078	.072 <sup>a</sup>	.065 <sup>a</sup>	.002 <sup>b</sup>	.078 <sup>a</sup>
Total aggres- sion	High	Base	.042	.051	.036	.057				
		Exp	.070	.061	.062	.073	.033 <sup>a</sup>	.062 <sup>a</sup>	.072 <sup>a</sup>	.074 <sup>a</sup>
	Low	Base	.063	.049	.092	.089				
		Exp	.071	.038	.116	.091	.072 <sup>bc</sup>	.042 <sup>c</sup>	.195 <sup>a</sup>	.082 <sup>b</sup>
	All	Base	.055	.050	.064	.073				
		Exp	.070	.049	.089	.082	.078 <sup>a</sup>	.052 <sup>b</sup>	.099 <sup>a</sup>	.073 <sup>a</sup>
Hostile aggres- sion	High	Base	.013	.014	.015	.020				
		Exp	.023	.022	.027	.021	.035 <sup>a</sup>	.024 <sup>a</sup>	.034 <sup>a</sup>	.023 <sup>a</sup>
	Low	Base	.027	.016	.030	.037				
		Exp	.030	.013	.052	.042	.029 <sup>b</sup>	.016 <sup>b</sup>	.045 <sup>a</sup>	.036 <sup>ab</sup>
	All	Base	.020	.015	.026	.028				
		Exp	.029	.017	.039	.031	.032 <sup>ab</sup>	.020	.039 <sup>a</sup>	.030 <sup>ab</sup>
Pro- social aggres- sion	High	Base	.029	.033	.013	.031				
		Exp	.041	.027	.025	.039	.045 <sup>a</sup>	.026 <sup>b</sup>	.029 <sup>ab</sup>	.030 <sup>ab</sup>
	Low	Base	.035	.023	.044	.034				
		Exp	.036	.023	.057	.041	.035 <sup>bc</sup>	.022 <sup>c</sup>	.054 <sup>a</sup>	.042 <sup>b</sup>
	All	Base	.032	.028	.027	.032				
		Exp	.033	.025	.041	.040	.040 <sup>a</sup>	.024 <sup>b</sup>	.042 <sup>a</sup>	.040 <sup>a</sup>



Table 9 (continued)

Variable	Structure	Time Period	Means				Adjusted Means			
			N	P	P	P	N	P	P	P
Social interaction with adults	High	Base	.053	.047	.037	.045	.075 <sup>a</sup>	.068 <sup>a</sup>	.037 <sup>b</sup>	.043 <sup>b</sup>
		Exp	.065	.065	.029	.033				
	Low	Base	.051	.049	.063	.056	.050 <sup>a</sup>	.047 <sup>a</sup>	.071 <sup>b</sup>	.042 <sup>a</sup>
Exp		.051	.045	.076	.054					
All	Base	.052	.048	.050	.050	.065 <sup>a</sup>	.059 <sup>a</sup>	.053 <sup>ab</sup>	.044 <sup>b</sup>	
	Exp	.058	.055	.052	.046					
Persistence	High	Base	.064	.055	.066	.050	.053	.047	.047	.068
		Exp	.046	.039	.052	.059				
	Low	Base	.097	.109	.069	.083	.086	.075	.073	.039
Exp		.092	.038	.076	.089					
All	Base	.081	.082	.068	.067	.072 <sup>ab</sup>	.061 <sup>a</sup>	.062 <sup>ab</sup>	.077 <sup>b</sup>	
	Exp	.069	.064	.064	.074					
Teacher-led instruction	High	Base	.119	.125	.166	.076	.098 <sup>a</sup>	.103 <sup>a</sup>	.122 <sup>a</sup>	.056 <sup>b</sup>
		Exp	.103	.109	.125	.056				
	Low	Base	.040	.067	.042	.043	.065 <sup>b</sup>	.101 <sup>a</sup>	.033 <sup>c</sup>	.044 <sup>c</sup>
Exp		.059	.100	.031	.041					
All	Base	.079	.096	.104	.062	.092 <sup>b</sup>	.102 <sup>a</sup>	.077 <sup>b</sup>	.050 <sup>c</sup>	
	Exp	.081	.104	.078	.048					
Waiting	High	Base	.068	.077	.046	.103	.063	.064	.052	.067
		Exp	.075	.064	.057	.071				
	Low	Base	.034	.025	.029	.019	.044	.036	.027	.028
Exp		.040	.033	.025	.024					
All	Base	.051	.051	.037	.061	.053	.050	.040	.047	
	Exp	.058	.049	.041	.048					

Note: Within any row, means designated by the same superscript are not significantly different.

Table 10

## Analyses of Covariance (Baseline as Covariate) for Individual Observations

F ratios

Dependent Variable	Treatment (3, 124 df)	Sex (1, 124 df)	Structure (1, 124 df)	Treatment x Sex (3, 124 df)	Treatment x Structure (3, 124 df)	Sex x Structure (1, 124 df)	Treatment x Sex x Structure (3, 124 df)
Positive social interaction with peers	3.81*	.01	11.84**	.17	1.37	.88	.41
Verbal interaction with peers	1.26	.08	5.59*	.43	3.73*	.67	.68
Imaginative play	3.72*	.76	.38	.33	1.28	.97	.90
Non-verbal interaction with peers	.84	2.78	.69	.08	1.60	.52	3.45
Commands	2.51 <sup>a</sup>	.25	3.47 <sup>a</sup>	.43	3.14*	0	.95
Demandingness to peers	3.96**	.01	3.05 <sup>a</sup>	.35	4.48**	.17	.59
Verbalization of feeling	.31	.08	.47	.07	3.47**	.47	.89
Total aggression	4.68**	3.60 <sup>a</sup>	.13	.44	2.50 <sup>a</sup>	.04	1.04
Hostile aggression	2.79*	.42	.41	.58	1.54	.42	.41
Prosocial aggression	4.67**	2.53	1.01	.20	3.37*	0	1.35
Social interaction with adults	2.62 <sup>a</sup>	.14	.30	1.18	4.54**	4.36*	.33
Persistence	1.38	4.09*	15.61**	.37	.12	.19	1.13
Teacher-led instruction	17.78**	.14	19.23**	.16	9.72**	.06	.11
Waiting	1.37	3.10	24.36**	.81	1.04	.84	1.13

a  $p < .10$ \*  $p < .05$ \*\*  $p < .01$

Table 11

## Adjusted Means for Experimental Period of Individual Observations for Classes Divided by Structure

Variable	Structure		F ratio
	High	Low	
Social interaction with peers	.039	.025	11.84**
Verbal interaction with peers	.073	.059	5.59*
Imaginative play	.035	.039	.38
Non-verbal interaction with peers	.029	.032	.69
Commands	.019	.024	3.47 <sup>a</sup>
Demandingness to peers	.037	.044	3.05 <sup>a</sup>
Verbalization of feeling	.076	.090	.47
Total aggression	.073	.075	.13
Hostile aggression	.029	.032	.41
Prosocial aggression	.034	.038	1.01
Social interaction with adults	.056	.052	.30
Persistence	.055	.082	15.61**
Teacher-led instruction	.095	.061	19.33**
Waiting	.062	.034	24.36**

<sup>a</sup>  $p < .10$

\*  $p < .05$

\*\*  $p < .01$

Table 12

Adjusted Mean Scores for Circle Time, Pick-up Time, and Rest Time for Treatments in High and Low Structure Classes

Variable	Structure	Treatments				All
		Neutral	Prosocial TV Only	Prosocial TV + Materials	Prosocial TV + Training	
Circle Time	High	3.19	3.27	3.54	3.45	3.36
	Low	3.30	3.39	3.26	3.42	3.34
Pick-up Time	High	4.23 <sup>a</sup>	3.92 <sup>ab</sup>	4.31 <sup>a</sup>	3.69 <sup>b</sup>	4.04
	Low	3.60	3.50	3.37	3.51	3.50
Rest time	High	6.69 <sup>a</sup>	7.14 <sup>a</sup>	4.26 <sup>b</sup>	6.81 <sup>a</sup>	6.73
	Low	5.04	4.80	5.10	5.99	5.23

Note: Means with the same superscript are not significantly different.

Table 13

Adjusted Mean Scores in Experimental Period for  
Motor Inhibition and Reflection -- Impulsivity

Variable	Structure	Treatments				All
		Neutral	Prosocial TV-only	Prosocial TV-Materials	Prosocial TV Training	
Draw a Line	High	48.2	47.6	-	53.4	49.7
	Low	48.7	47.3	47.9	51.0	48.7
Walk a Line	High	46.6	50.1	-	54.4	50.4
	Low	52.0 <sup>a</sup>	48.3 <sup>a</sup>	38.6 <sup>b</sup>	48.9 <sup>a</sup>	47.0
KRISP Latency	High	53.3	44.3	-	47.4	46.7
	Low	55.2	53.0	49.9	57.7	54.0
KRISP Errors	High	48.4	51.1	-	47.8	49.1
	Low	52.7	52.5	48.7	51.5	51.4
KRISP Impulsivity (Errors - Latency)	High	-0.28	7.61	-	0.01	2.45
	Low	-2.52	-0.67	-0.70	-5.56	-2.36

Note: Means in one row with the same superscript are not significantly different.

Table 14

## Mean Helping Scores on the Collage Measure in the Experimental Period

Variable	Structure	Condition			
		Neutral	Prosocial TV Only	Prosocial TV Materials	Prosocial TV Training
Frequency	High	.14	.13	-	.93
	Low	1.07 <sup>a</sup>	.25 <sup>b</sup>	1.61 <sup>ab</sup>	.75 <sup>ab</sup>
	All	.79 <sup>ab</sup>	.14 <sup>b</sup>	1.61 <sup>a</sup>	.79 <sup>ab</sup>
Duration	High	5.42	.39	-	38.2
	Low	23.2	13.58	69.65	27.7
	All	14.31	6.99	69.65	33.0

Note: In any row means with the same superscript are not significantly different.

Table 15

Frequencies of Scores on Delay of Gratification  
in the Experimental Period

Length of time in delay of gratification	Condition			
	Neutral	Prosocial TV-only	Prosocial TV Materials	Prosocial TV-Training
Low (0-15 seconds)	6	3	7	10
Medium (15 - 535 seconds)	1	2	4	5
High (600 seconds)	12	15	11	23

	Structure	
	High	Low
Low & Medium	8	30
High	30	31

Content Summaries of "Mr. Rogers' Neighborhood" FilmsAnd their Corresponding ThemesROCKET SERIESSummaries of the three films:

#188: In the Neighborhood of Make Believe (NOM) Handiman Negri and Lady Elaine Fairchild plan to launch a rocket to Some Place Else. King Friday says a launching needs rules and gives them several. Everyone prepares for launch. Dr. Bill Platypus takes off in the rocket, but lands in the castle. All are disappointed, but King Friday suggests the need for more rules, and they will try again. Mr. Rogers says sometimes a new thing is scary until you know all the rules involved.

#189: NOM--Lady Elaine Fairchild and Handiman Negri try another launch. This time Dr. Bill lands near his home; again a failure. Lady Elaine Fairchild hits the rocket because she is mad and doesn't know what else to do. Handiman Negri suggests they need to learn more about rockets, then make better plans and try again. Mr. Rogers says that each time they tried again, the rocket went better and a little further. It's people who make plans that make things work well.

#190: Mr. Rogers says it takes a long time to grow, but each little person can expect to grow big. NOM--with the help of rules and planning, the rocket is launched and goes successfully to Someplace Else. Everyone is happy because the rules helped and kept Dr. Bill safe. Mr. Rogers generalizes about rules. People like to be told why there are rules.

Themes from the three films:

1. Persistence: delay of gratification.
2. Self-regulating behavior: learning to accept rules, learning to wait, learning to control aggressive impulses.



## Appendix A (continued)

LEF - HEN. CONFLICT SERIESSummaries of the two films:

#442: Mr. McFeely delivers a package to Henrietta--dresses from Collette. Mr. McFeely then delivers cement to Lady Elaine Fairchild and helps her pour it. She is patching her museum wall. Handiman Negri comes and helps her. When Henrietta comes by in one of her new dresses, LEF expects her to want to help also. But Henrietta doesn't want to get messy. LEF doesn't understand and calls her a sissy, so Henrietta gets mad and leaves. Then LEF feels bad and wonders if it is wrong to be the way she is. Handiman Negri tells her everyone is different and people like her the way she is. Mr. Rogers talks about teasing; sometimes it can make you feel bad about who you are. People should feel good about who they are.

#443: NOM--Handiman Negri goes to see Henrietta, who is still dressed fancy and still upset with LEF. Handiman Negri tells her that LEF had said she sometimes wishes she was like Henrietta. Henrietta can hardly believe it. Handiman Negri tells her she and LEF are very different, but NOM likes and needs both of them. Handiman Negri goes to the castle, sees LEF go by all dressed up (like Henrietta). King Friday asks Handiman Negri to make his throne into a rocking throne. Henrietta comes by, and wants to be a little bit handy (like LEF) and helps Handiman Negri with the throne. They try to make it rock, but fail, and the King is a little upset. Henrietta explains that the royal throne wasn't really meant to rock. A rocking throne is different. (Parallel to different but special people.) King Friday decides to have Corney make a new rocking throne. Mr. Rogers talks about differences between people and then goes to Francois Clemmons' studio to hear some musicians.

Themes from the two films:

1. Recognition and identification of feelings: self and others.

2. Self-perception: uniqueness of each individual, acceptance of differences in self and others.
3. Helping, sharing, and cooperative behavior.

### X - CORNEY CONFLICT SERIES

#### Summaries of the two films:

#398: Mr. Rogers and Francois Clemmons practice golf. Francois Clemmons almost hits Mr. Rogers. Mr. Rogers tells of accidentally hitting someone when he was small and how both he and his mother got angry. NOM--Henrietta gives Francois Clemmons a box of dresses to take to Elsie Jean Platypus, and goes inside to finish a letter to Collette. On his way, Francois Clemmons meets X who is practicing his golf swing. X is waiting for Henrietta and is getting annoyed. Francois Clemmons goes on to the Platypus mound. Corney passes by in a hurry with a big load of boxes. Francois goes after Corney to help, but it is too late. X has swung his golf club and knocked Corney's boxes all over. Francois helps pick them up. X is sorry, but Corney is angry and hurries off. X admits to Francois that he had been angry about waiting for Henrietta and had forgotten to be careful. Mr. Rogers says there are some things you might do when you are angry that can hurt people, but suggests there are other things to do with the mad that you feel that don't hurt people.

#399: Mr. Rogers listens to Bob Trow's son and his friends sing. Son says he likes his family, even though they get angry sometimes. NOM--Corney is having a swing sale and sends Mr. McFeely to tell everyone to come. Mr. McFeely tells X, but X won't go. X tells Robert Troll that Corney doesn't really want him, and that everyone would have a better time if X isn't there. Robert Troll is concerned about friend X and asks Corney if he knows what is wrong. Corney and Robert Troll go to find X. X tells them he is a bad owl who hurts people, because

## Appendix A. (continued)

he knocked Corney's boxes over yesterday. Corney says yes, he was angry with X yesterday, but not any more, because he knows X will try to be more careful. Both Robert Troll and Corney assure X that everybody does bad things sometimes, but that doesn't make them bad people. X feels better and goes to the swing sale. Mr. Rogers repeats that good people do bad things sometimes.

Themes from the two films:

1. Self-regulating behavior: learning to accept rules, learning to wait, coping with frustration; learning to control aggressive impulses; finding alternative courses of action.
2. Recognition and identification of feelings: self and others.
3. Helping behavior.
4. Verbalization of feelings.

NOM SWITCH SERIESSummaries of the four films:

#446: Mr. Rogers goes to McFeelys who are wall papering. Everyone helps; you need planning for such a job; you must not paper over windows or doors. Bob Trow accidentally bumps Chef Brockett and juice gets spilled on the new paper. It's okay; accidents do happen and it can be fixed. NOM--Mrs. McFeely takes wall-paper to Lady Elaine Fairchild and tells her about redecorating. Lady Elaine Fairchild decides NOM could use redecorating and uses her boomerang-toomerang-soomerang to switch everything. X and Daniel Tiger are both somewhat frightened and don't like the change. Daniel refuses to come out of his clock. Troll gets lost. King Friday is furious; his castle has been completely wallpapered, even the windows and doors. Lady Elaine Fairchild can't understand why everyone doesn't like the change. Mr. Rogers mentions that Lady Elaine Fairchild changed things without asking anyone, and people like to know when things are going to happen.

#448: Mr. Rogers goes to Bob Trow's workshop; they explain pulleys and the winch. NOM-LEF is selling maps. King Friday explains his idea of a winch with sandpaper ribbon to connect everyone to the castle. Lady Aberlin goes to distribute the ribbon. At the Platypus mound she hears little Anna crying because of the Switch. Her parents are worried about her. Lady Aberlin finds Edgar and the winch helps them back to the castle. Mr. Rogers says sometimes its nice to have a change, and sometimes its nice to have things just the way they were.

#449: Because of the Switch; Henrietta's glass cat has gotten broken and she is sad. Everyone is upset over the Switch (Anna still crying) and King Friday orders LEF to replace everything. LEF refuses. Then Lady Aberlin tells LEF about poor Anna, and LEF hears her crying. LEF finally realizes that her Switch really had hurt someone else, and she decides to use her boomerang-toomerang-soomerang and put everything back the way it was. Everyone is thrilled to have the old NOM back; Anna stops crying. Seeing everyone happy, LEF decides this is best after all. She hadn't liked King Friday's orders, but when Anna needed her, she had known what to do. Many of the neighbors still have mad feelings, however, and King Friday suggests having a Festival of Mad to get rid of them. Mr. Rogers repeats that Anna's crying had changed LEF's feelings, and asks what do you do when feeling mad?

#450: Mr. Rogers pounds nail with hammer. "NOM--Gong begins Festival of Mad. LEF hadn't thought about others' feelings and they are still mad. They hit a punching bag. Francois Clemmons tells Daniel, who has been hiding in his clock, that everything is switched back and he can come out now. A Dixieland group provides music and they clap and play tambourines. Robert Troll wins the Ring-the-Bell contest (hammering) and Daniel wins the Celery-Eating Contest. Everyone feels better when they have gotten rid of some of their mad feelings. LEF

## Appendix A (continued)

wants her neighbors for her friends, and King Friday suggests she ask before she switches things again. LEF is chosen to close the festival by hitting the big gong. Mr. Rogers stresses that there are different ways to say "I am angry" and that after you say you are angry, it is easier to say "I love you," and it gives you a good feeling.

Themes from the four films:

1. Helping, sharing, and cooperative behavior.
2. Recognition and identification of feelings: self and others.
3. Self-regulating behavior: learning to accept rules, coping with frustration, learning to control aggressive impulses.
4. Persistence.

HENRIETTA SERIESSummaries of the four films:

#306: NOM--Mr. McFeely brings a letter for Grandpere from his granddaughter Collette. She is coming for a visit. Grandpere shows Mr. McFeely a picture of her. She is very pretty. When Henrietta comes and sees the picture and hears Dr. Bill Platypus say how pretty Collette is, she is not very happy. Later when X and Lady Aberlin go to see her, she is all dressed up and speaks French to them. Lady Aberlin and X are concerned about her. Lady Aberlin goes to the Eiffel Tower and sees fancy Collette's picture. She understands why Henrietta is all dressed up and hopes that she will realize that everyone likes Henrietta just as she is. Mr. Rogers repeats that Henrietta thought people wouldn't like her anymore unless she was fancy.

#307: Mr. Rogers is doing fancy writing. He spills ink and gets angry. NOM--Henrietta is still dressed fancy. Handiman Negri sees that Henrietta is sad and reassures her that he is her friend. Handiman Negri then sees Collette's

picture, exclaims how fancy she is, and Henrietta is hurt even more. Henrietta tells the picture that Collette can't take her place, and knocks the picture to the ground. She is frightened then and tries to get it back and can't. Handiman Negri comes, picks up the picture and finds Henrietta. She asks him not to send her away. Handiman Negri realizes she knocked over the picture, helps her fix it, and explains that she is the only Henrietta they have and they need her and would never send her away. Mr. Rogers says that Henrietta feels left out and angry.

#309: NOM--Collette has arrived and is with Grandpere. Chef Brockett brings her a surprise cake. They put it on the railing of the balcony where it looks like it might fall, then they go inside. Later Robert Troll finds Henrietta looking at the cake and wishing it would fall. Robert Troll knows she feels that if she can't have the cake, she doesn't want Collette to have it either. A gust of wind then knocks off the cake and it smashes onto the floor. Henrietta thinks she did it by wishing, and is miserable and afraid she'll be sent away. Lady Elaine Fairchild comes, sees the cake, and tells them a gust of wind has blown things down all over the Neighborhood, just like the cake. It wasn't because of Henrietta's wishing. Lady Elaine Fairchild uses her boomerang-toomerang-soomerang to return the cake to its proper place in perfect condition. Henrietta is very grateful.

#310: Mr. Rogers tries to make folded paper hat. NOM--Lady Aberlin goes to the Tower and finds Grandpere and Collette. The cake is still uneaten. Collette has decided to share it with everyone at a party. She suggests that Lady Aberlin distribute party hats to invite people. Lady Aberlin takes a hat to Henrietta, but Henrietta says she's not going because it's not fair that Collette had first a cake and now a party all to herself. Lady Aberlin explains that Collette is sharing the cake at the party. Henrietta still feels hurt and

won't go. Lady Aberlin distributes the other hats, then goes back to the Tower. When Grandpere learns that Henrietta is not coming he's upset, since he needs her to introduce people to Collette. Henrietta feels much better when Lady Aberlin tells her she is needed to do something Collette can't do, and goes to the party. Mr. Rogers and Mr. McFeely try again to make paper hats--again fail. Some things I can do well; other things I can't do so well.

Themes from the four films:

1. Self-perception: uniqueness of each individual, acceptance of differences in self and others.
2. Helping, sharing, and cooperative behavior.
3. Recognition and identification of feelings: self and others.

DANIEL - PANDA BIRTHDAY SERIES

Summaries of the three films:

#422: Mr. Rogers paints, and suggests that some people paint when they are angry to help them feel better. Other people do different things when they are angry. NOM--Panda is very sad over not having a birthday. He mentions that on Planet Purple everything is the same, but here there are lots of different things and different people. At the clock, Francois Clemmons and Daniel Tiger are talking about birthdays. Daniel's birthday is Friday, but he feels sorry for Panda and gives his birthday to him. Panda is then very happy to have a special day. Mr. Rogers wonders how Daniel will feel the next day and stresses that in the real world everyone has a special birthday, a name, a body, a history.

#423: NOM--Daniel's friends are worried about him because he has a cough. Yoshi goes to see how he is. While coughing, Daniel tells Yoshi how he had felt sorry for Panda and had given him his birthday, but now he feels sad and left out. Panda is getting a ride in King Friday's plane and that is what Daniel had wanted.

Yoshi explains that two people can share the very same birthday. Handiman Negri agrees. When Daniel understands that both he and Panda can share their birthday and both go for a plane ride, he is happy and stops coughing. Mr. Rogers again goes over sharing birthdays.

#425: NOM--Trolley decorated. It's Daniel and Panda's birthday and they prepare for their plane ride. King Friday urges them to be careful. Al Worden is going to take them to Planet Purple and they will stop at the moon on the way. Lady Elaine Fairchild brings a cake for the moon, which is also sharing this birthday. Yoshi, Al, Daniel, and Panda take off. Mr. Rogers stresses that the plane ride to Planet Purple was a pretend one. He suggests making up stories about their ride.

Themes from the three films:

1. Helping, sharing, and cooperative behavior.
2. Recognition and identification of feelings: self and others.
3. Verbalization of feelings: sadness.

ROCKING THRONE

Summaries of the two films:

#444: Mr. Rogers shows baby chick--takes a long time to hatch. NOM--King Friday has Mr. McFeely take picture of the rocking throne that he wants to Corney. Corney is taking a nap and doesn't want to be disturbed. He is cross with Mr. McFeely and won't listen to him. Mr. McFeely didn't know what to do. Later Corney apologized, explaining that he gets cross when he is sleepy. He gets excited about building the rocking throne. Mr. Rogers says it is hard to know what to do when someone won't listen when you try to tell them something important.

#445: Mr. Rogers does a potatoe print; says it takes a long time for things to grow and it's hard to learn to wait. NOM--Corney is finishing the rocking



throne. He has Miss Paulificate do some embroidery for it. X the Owl is trying hard to wait, but gets impatient; he wants to deliver the throne now and gets a little angry. When the throne is finally finished and delivered, King Friday is very happy with it; and very pleased that they took the time to do the job well. King Friday knows that all good growing things take time, and he likes the way X is growing. Mr. Rogers later goes to Handiman Negri's music shop to hear a group of black musicians.

Themes from the two films:

1. Delay of gratification.
2. Self-control.
3. Understanding feelings of others.
4. Verbalization of feelings.

Neutral Films

Circus Day in Our Town  
Pride, The Saddle Horse  
African Girl - Malobi  
Airport in a Jet Age  
Adventures of Bunny Rabbit  
Animals Growing Up  
Jobs in the City - Construction  
Jazzoo  
Norwegian Children  
One Rainy Day  
Matter Everywhere  
Mr. Moto Takes a Walk  
Milk - As You Like It  
Space Flight Around the Earth  
Spring Comes to the City  
Tembo the Baby Elephant  
Visit with Cowboys  
Rhythm is Everywhere  
Rabbits  
Pony Farm  
Animals Move in Many Ways  
Curious George Rides a Bike  
Kangaroos  
Fireman  
Animals of the Zoo  
People Soup  
Three Little Kittens  
Zoo Animals in Rhyme  
Prickly, the porcupine  
Spring in the City

Suggestions for Use of Prosocial Materials  
For Groups without Training

Dramatic Play Materials:

1. Set of stand-up figures with City Backdrop.
2. Set of pictures of puppets and personalities from "Mr. Rogers' Neighborhood" with a Neighborhood of Make Believe Backdrop.
3. Flannel board and pieces.
4. Masks; fabrics for dressup clothes.
5. Telescopes and telecans.
6. Wheels.
7. Puppets.
8. Material to create a mock-up of the castle of make believe.

We suggest that for the first four weeks of films, you limit the number of props and pictures introduced with the backdrops and flannel board to those appearing in the film each day. To assist you in accomplishing this, we have included pictures of all the characters and lists of the films in which they appear. You may wish to continue limiting the pictures and props throughout the eight weeks. However, after four weeks, the children will have met all the characters, and they may want to use some from different series together, as they create their own situations.

With the city backdrop, you may want to vary the number of stand-up figures you make available at any one time.

In order to give everyone an opportunity to use the new materials without having to wait a long time for a turn, you may want to introduce all of them on the

## Appendix C (continued)

same day in different parts of the room. From time to time during the eight weeks of films, if interest seems to subside, perhaps rearranging the materials in different locations in your room will help, or making them available during a different time of day.

An airplane appears in one of the series and a rocket in another. A portable play wheel is provided for dramatic play to use with these series of films. Included in the box is some plastic tape which you may want to use to outline a plane and/or a rocket on your floor. There are also some materials which can be used as telescopes and telecans (walkie-talkies) with these series.

### Books:

If your children enjoy looking at books during rest time or throughout the day, you may want to introduce all these on your book shelf at one time, putting a like number of your present supply away, and keeping your total number on the shelf about the same as usual.

If your usual story time is a total group time, you may sometimes enjoy dividing the group in two with the teacher's aide reading to half the group. If some children do not seem ready for a group story time, perhaps there are some quiet activities they could engage in (puzzles, pegs, other manipulative materials) independently at this time.

From time to time you may wish to vary the location and the arrangement of your story group--from chairs in a circle to individual rugs or mats, to one large blanket or rug, to outdoors under a tree on warm days. If the group is large, it helps everyone to see if the teacher sits across from and higher than the children, and moves the book from side to side and in front of herself all the

time she is reading so that the pictures are clearly visible to everyone all during the story. If the teacher varies her voice when reading different roles, it will enhance the story for the children.

Records:

With the exception of story time, and construction work with blocks or with tools, music lends itself to almost every other time period in an early childhood program. In addition to special times that you may regularly designate for listening, singing, and rhythmic activities, other listening times might be during rest, during snack, and during lunch times. Since snack and lunch periods are also good times for conversation, music at these times should be selected for "mood setting" and for the most part should be instrumental without lyrics.

Music belongs with activity and can contribute considerably to creative art experiences such as easel painting, finger painting, and work with clay, and is also good background for water play.

The records that are included in these materials all have words. We hope you will enjoy using them with your group for your regular listening and singing times, as well as at rest time, and during many activities.

Suggestions for Use of Neutral Materials for TeachersBooks

If your children enjoy looking at books during rest time or throughout the day, you may want to introduce all these on your book shelf at one time, putting a like number of your present supply away, and keeping your total number on the shelf about the same as usual.

We have not followed any special theme in our selection, but have tried to provide a variety of subject matter, and a range of complexity, hoping each child will find special enjoyment in at least one book.

If your usual story time is a total group time, you may sometimes enjoy dividing the group in two with the teacher's aide reading to half the group. If some children do not seem ready for a group story time, perhaps there are some quiet activities they could engage in (puzzles, pegs, other manipulative materials) independently at this time.

From time to time you may wish to vary the location and the arrangement of your story group--from chairs in a circle to individual rugs or mats to one large blanket or rug, to outdoors under a tree on warm days. If the group is large, it helps everyone to see if the teacher sits across from and higher than the children and moves the book from side to side and in front of herself all the time she is reading, so the pictures are clearly visible to everyone all during the story. If the teacher varies her voice when reading different roles, it will enhance the story for the children.

Games

We are not concerned that children follow the specific rules given for some of the games. We feel that children often work out their own approach to games that is appropriate to their level of understanding. However, children with

## Appendix D (continued)

older siblings are often insistent that someone teach them the rules as printed on the box lid. In this case we hope you will familiarize yourself with the rules, and explain them as simply as possible at the same time assuring them that when they are learning a new game, it's all right to try it their own way the first few days.

Freedom to experiment with their own designs with the colorforms, color cubes, and Build a Picture will help the children to gain in self-confidence and self-reliance. Teachers will know which children may need extra encouragement and praise to initiate and then pursue their own ideas. The patterns and suggestions in the boxes could be used much later in the year to stimulate renewed interest in the materials after the children have had ample time to develop and work out their own ideas.

When children have difficulty with new puzzles, some cues that may be helpful are: color, shape, size, usual location of a familiar part.

The Matcub Tens Blocs may provide a different level of experience with numbers for children who have already gained some skills in this area. For others the introductory experience may be purely manipulative. We hope all children will find some pleasure in their use.

Perhaps some of your children enjoy assuming the teacher's role with lotto games. If you can help them work out taking turns, this can be a very satisfactory experience.

### Records

With the exception of story time, and construction work with blocks or with tools, music lends itself to almost every other time period in an early childhood program. In addition to special times that you may regularly designate for listening, singing, and rhythmic activities, other listening times might be during rest, during snack, and during lunch times. Since snack and lunch periods

Appendix D (continued)

are also good times for conversation, music at these times should be selected for "mood setting" and for the most part should be instrumental without lyrics.

Music belongs with activity and can contribute considerably to creative art experiences such as easel painting, finger painting, and work with clay, and is also good background for water play.

The records that are included in these materials all have words. We hope you will enjoy using them with your group for your regular listening and singing times, as well as at rest time, and during many activities. The Ella Jenkins records encourage responses from the children.



## Appendix E

Sample Circle Script

DAN - PANDA BIRTHDAY SERIES

Monday - DAY #1

(View Film #422)

MATERIALS NEEDED FOR CIRCLE TIME:

1. Cassette: Sometimes I Feel So Sad
2. Teacher's Book: Sometimes I Feel So Sad
3. Table with NOM Backdrop and figures of: Panda

F. Clemmons.

D. Tiger

These should be on a table near the locker area so children can see, play with, and arrange them as they wish when they first arrive at school.

4. Materials for making one of the rhythm instruments on nearby tables.

SCRIPT AND INSTRUCTIONS:Song and Book:

PANDA WAS SAD BECAUSE HE DIDN'T HAVE A BIRTHDAY. WE HAVE A SONG ABOUT FEELING SAD. I'LL PLAY IT FOR YOU NOW.

(Play cassette of Sometimes I Feel So Sad and show pictures in accompanying book. Go through this twice and encourage children to sing along as soon as possible.)

Dramatic Play with NOM Backdrop:

(Teacher moves the appropriate picture puppets as children help her to retell the story.)

WHO WAS IT THAT WAS FEELING SO SAD TODAY?

(Panda)

WHAT DID PANDA DO ABOUT HIS SADNESS?

(He told his friends about it.)

DO YOU REMEMBER WHO HIS FRIENDS WERE?

(Mrs. Platypus--or Elsie Jean, and Daniel Tiger, and Francois Clemmons.)

DID THEY DO ANYTHING TO HELP PANDA FEEL BETTER?

DANIEL TIGER HELPED HIM FEEL BETTER BY GIVING PANDA HIS BIRTHDAY, DIDN'T HE?

FRANCOIS CLEMMONS HELPED BY LISTENING AND SAYING THAT HE UNDERSTOOD. WHEN SOME-

ONE HELPS YOU IT MAKES YOU FEEL HAPPY TOO.

Activity:

(Teacher indicates materials that are ready for making any of the rhythm instruments and suggests they begin working over there. This activity can be continued whenever it fits into the regular schedule, so that each child eventually makes a drum, a shaker, and a kazoo.)

Appendix F

Scales Used for Rating Teacher Characteristics

Baseline - only rating

1. leads many activities	1.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
2. high degree of private or semiprivate communication	2.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
3. overt facilitation of task-oriented behavior	3.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
4. negatively evaluates children (disapproval)	4.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
5. positively evaluates children (approval)	5.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
6. domination through threat	6.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
7. uses touch physical affection in comforting	7.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
8. expresses and labels own feelings	8.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						
9. publicly humiliates children (shame, ridicule) as means of control	9.	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
comments _____						

Appendix F (continued)

10. specific techniques used in communication of listening	10.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
11. Asks for reasons of behavior when disciplining	11.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
12. private disciplining	12.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
13. calm, acceptant transactions	13.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
14. academically oriented	14.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
15. uses imaginative play and fantasy	15.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
16. use of control technique	16.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
17. class activities structured	17.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
13. sarcastic	13.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				
19. insistence upon attention to task	19.	strongly agree	neither agree nor disagree	strongly disagree
comments _____				

## Appendix F (continued)

- |  | strongly<br>agree | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
|--|-------------------|-------|----------------------------------|----------|----------------------|
| 20. controls through standards with appeal to convention as source of authority<br><br>comments _____  | 20. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 21. attentive to pupil's needs<br><br>comments _____   | 21. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 22. good natured. warm<br><br>comments _____   | 22. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 23. supportive<br><br>comments _____   | 23. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 24. patient<br><br>comments _____  | 24. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 25. high tolerance of frustration<br><br>comments _____  | 25. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 26. has children wait long after announcing activities<br><br>comments _____   | 26. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |
| 27. misinterprets child's behavior or intentions (child may be trying to be helpful (teacher does not see this and scolds child for misbehaving)<br><br>comments _____ | 27. agree         | agree | neither<br>agree nor<br>disagree | disagree | strongly<br>disagree |

Appendix G

Definitions of Observation Categories

SECRET

## Observation Categories

General instructions: Behavior and certain types of stimulus situations will be recorded sequentially as they occur. The codes appear on a single sheet. Definitions of each category follow:

Each child will be observed for 5 minutes. The 5 minute period will be divided into 5 one-minute time blocks. Any one behavior category should be scored no more than once in a minute. More than one category may be scored within the same minute.

### Abbreviations

- S = child observed
- C = any other child
- T = teacher
- O = other person, child, or adult

For each observation, play activity, behavior category, object of behavior and consequences of behavior will be noted. In some instances, which will be specified later, modifiers, such as intensity, will also be noted.

### Scoring of a continuous or repeated act

For the continual or repeated occurrence of the same action, during the 5 minutes, score the behavior category only once per minute, but at intensity level 3.

e.g., S may hit Child A one time or 12 times and still only get one rating of ap (physical aggression) so long as this action has all occurred in one time block. However, the intensity of the behavior is high in the two cases and would be scored differently for each.

### Modifiers

These are symbols which can be added to categories to indicate that the action has a particular component. These are not to be used alone.

- v = behavior has verbal component
- neg = negative, the reverse of the behavior described in a category, e.g., negative comfort, reassurance, sympathy--S laughs when child falls off a rocking horse
- 1 = low intensity. Behavior is minimal, but scorable.
- 3 = high intensity. Unusually intense, long-lasting, or repetition of the same actions.

An average intensity "2" is assumed and will not be rated.

### Play Activities (to be designated by brief beginning of word)

When the following categories describe the major activity in which S is engaged, use them. If he is engaged in some activity not listed, write it if you

can do so without losing the behavior ratings. If you cannot write it, score Misc.:

- art = art and crafts--any artistic activity such as painting, cutting and pasting, clay, crafts, or others where materials are basically unstructured.
- blo = blocks.
- cli = climb --any climbing on bars or other equipment.
- con = construction--putting together materials which are at least partially structured such as snap-blocks, puzzles, tinker-toys, Lincoln logs.
- dol = play with dolls or related type figures (cardboard stand-up people).
- gam = an organized game such as tag, football, races, or any other group activity where there are at least some minimal rules being followed.
- gro = group--a demonstration or other group activity led by adult.
- hou = house.
- jui = juice.
- man = manipulative--small toys such as doll furniture, toy garages, etc.
- mis = misc.--S is engaged in an activity that does not fit above categories. Write in what the activity is.
- mot = gross motor activities--running, pushing things, or any other gross motor activity not included in more specific categories above.
- mus = music.
- non = none--S is wandering, going between tasks, or just doing nothing.
- pup = play with puppets.
- rea = read--use of books or listening to story.
- rol = role play--principal activity is playing house, cowboy, fireman, etc. Include dress-up if that is the principal activity.
- rol-c= Crime and adventure role playing such as cops and robbers or cowboys and indians.
- rol-o= other--role playing occupations (fireman), transportation (going for a boat ride in a chair), or other role playing activities not mentioned above.
- san = sand--in sand box and using sand (don't score this if he is doing something like painting on a table which happens to be in the sand box).



sho = shopwork--use of tools such as hammer, saw, etc.

sli = slide.

swi = swings.

veh = vehicle--any riding activities; trikes, etc.

walk = going on walk as a group.

wat = water--when principal activity.

Object (target) of behavior (Scored only with behavior categories, involving other people, not S alone.)

A = Adult

C = Child

CS = Children

B = Both adult and child

O = Score zero if it is not clear whether the behavior is directed towards anyone.

#### Positive Social Interaction

ic = Cooperation. S interacts with one or more children in such a way that behavior is directed toward a common goal. This may involve making something together, exchanging materials, taking turns, or participation on some organized game. Must last at least 10-15 seconds. Do not include circle time activities or activities that are organized and directed primarily by an adult. Activity may be suggested by an adult.

e.g.: Several boys run in circle chasing one another, but not aggressively. Has some organization like game of tag. They took turns being "IT."

Primitive football game with a group of boys chasing and tackling the one with the ball. This would be double scored with aggression.

S pushes wagon filled with other children.

Two S's putting clay into puzzle mold. Both are participating, but S doing so more actively than C.

Three girls jumping rope together, taking turns holding ends of rope.

it = Teacher-led cooperation. Cooperation as defined above except that the activity is led or directed by an adult.

e.g.: S joins T and other children to help carry table inside.

S participates in joint block building project that T organizes.

Several children work with T to carve out a Halloween pumpkin (fetching, carrying)

ii = Attempts to initiate social interaction. This would be scored whether C agreed to join S or not to join S in the suggested interaction. Any verbal or nonverbal attempt to initiate interaction with other (S) that is not aggressive. May involve suggesting an activity or attempting to join an activity. Do not score if S is merely watching other children's play.

e.g.: S asks C "Do you want to jump rope?"

"Let's play house."

"Come over here."

S tries to join group that is playing dolls.

ih = Helping and sharing. S gives or offers help or materials to other children or adults. Score even if C doesn't seem to want what is given. Can be suggested by other adult or child. Does not have to be spontaneous.

Do not include passing around food at meal times. Exclude sharing and helping that is enforced by T. This category is distinguished from cooperation in that ih is one way, instead of the 3-way exchange seen in cooperation.

e.g.: S gives piece of clay to C without being asked.

S offers crackers to observers.

When C is playing baby in crib, S brings her toys.

S pushes children on swings.

S goes to C and offers him a swing.

S brings blocks and C takes them repeatedly. She is delivering blocks.

ih negative = S refuses to share when asked by T or C. Do not score where S is defending property from other C who is trying to take it.

ia = Asking for help. Child asks an adult or child for help with something.

e.g.: "Help me up (on swing)"

ia negative = Showing signs of needing help, but not asking for it and not helping oneself. Do not score unless it appears S is trying to attract attention to his need for help.

e.g.: Walking around carrying jacket looking at people as if trying to attract attention, but doesn't say anything.

if = Finding or suggesting alternatives. S diverts or attempts to divert C from an aggressive or stressful act to another toy or activity.

e.g.: C wants S to get off swing. S points to another empty swing and/or tells C there is an empty swing ("Go over there").

C says to S give him some blocks: S says "I got mine here. You get some" (points).

S had all the giraffe rings (ring toss) and C wants some. One dropped. S said "Get that one" (points).

### Social interaction

S engages in social interaction with one or more others (either adult or child) with positive or neutral affect.

is = spoken (verbal) interaction. Score here if two or more children (or S and an adult) are engaged in a verbal exchange concerning a related area or topic. They may also be involved in nonverbal interaction. Do not score single verbalizations where no response is given to the speaker. The minimum unit or spoken social interaction is: a statement by the S, a response from the other (adult or child), and then another statement from the S. Interaction must go on for at least 10-15 seconds. Exact timing is not necessary, but it must be more than fleeting interaction.

When two children are standing or sitting together and talking and you can't understand what they're saying, spoken social interaction would be scored here if the tone of voice and facial expression are agreeable, sociable, and friendly (not angry).

Score this category "is," only if the spoken behavior is not scoreable in another behavior category. Do not score "is" if the behavior has been scored "ic." Do not score if T is addressing children and child's responses are limited to minimal words such as "yes," "what," "uh, huh."

e.g.: Two children are washing dishes next to each other and are conversing.

Two children are talking together while waiting for their snack.

S says "Look at that bus." Teacher says, "Yes, that's a big bus."  
Says S "It's green."

in = non-verbal social interaction. Score if child is engaged in some type of non-verbal exchange. Play can be scored here if it has not been scored in other categories. Play must involve interaction, not just two children playing next to each other. Doubtful cooperation cases fit in here (inter-twining hands). S must be showing active gestures, facial expressions, or the like. Interaction must go on for 10-15 seconds.

This category is scored only when S's behavior is complete non-verbal. If the S is also verbal, score as "is" not "in." If S is non-verbal, but other person says something, score as "in."

e.g.: Nap time. Two children lying near each other playing with each other's hair.

On a walk several children making funny faces at each other.

Running together on playground; children start and stop in same places.

On wheeled toys, riding together or bumping gently and non-aggressively.

### Verbalization of Feelings

#### Expressing feelings; Verbalization of Feelings

el = labeling feelings. Describing one's feelings with the use of an explicit feeling word.

e.g.: "I like you"  
"I like that puppy down there"  
"I'm mad"  
"I don't like you"  
"I'm sorry"

ew = statements beginning with "I want" or "I don't want." Do not include "I want" or "I don't want" statements at mealtime, e.g., "I want more juice" (eliminate this from scoring). Also, if an "I want" or "I don't want" statement is scorable in another category, don't score here, e.g., "I want to write my name myself."

e.g.: Statements that would fit in this category are:

"I want to get some" (refers to blocks)  
"I want to lay down here" (very intense) - intensity 3  
"No, I don't want to."

When "I want" or "I don't want" statements are accompanied by crying or intense emotion, score intensity 3.

e.g.: "I want a turn" (while crying)

en = nonverbal expression of feeling. Nonverbalization in situations where S is showing an emotional response--crying, clearly sad expressions, sings of fear (avoiding object, etc.). Do not score when an emotional response such as crying has been caused by accidents, falling, or bumped heads. If S cries because he was hit by C, include this. Do not score expressions of joy or happiness.

If any of these emotional responses are accompanied by talking, don't score here, even if you cannot understand the talking.

e.g.: S is being chased by C who is pretending to be a monster. S becomes visibly fearful--distorted face, hands up, then starts to scream.

### Understanding Others

ur = giving reasons for feelings or behavior. Verbal statements giving reasons for own behavior or about own feelings. Don't score "I don't want to" here unless a reason is given. Can be reply to a question about why child is doing something.

e.g.: "No, I just started doing this." (Explaining why doesn't want to play)  
S threatens C with block ("he hit me")  
S refuses to give some blocks to C  
"I had this first"

us = showing consideration and attempts to understand others. Questions about others' feelings, behavior, preferences that ask for perspective of that other. Also, includes any statements about other child's feelings or the reasons for child's behavior. Lastly, this category includes S telling C something C needs to know--pointing out hazards.

e.g.: Children on a walk. S says to C:  
"Watch out for your head"  
"Your mother's here."

uq = question. Asking for materials or objects.

e.g.: S asks C for clay

uc = comfort, sympathy, reassurance, praise, and physical affection. Any of the above given or directed toward another child or adult. When this behavior is all or part verbal, score the modifier verbal. Do not score touching another as "uc" unless it is clearly affectionate.

e.g.: Two boys were being punished. S puts her hands on face of C stroking gently.

At circle time C laid body on T, cuddling with T.

C wants a swing. S puts arm around C.

ua = attending to distress, drying, hurt, being punished. Looking intently and consistently at C when C is crying, hurt, or being punished. Do not score unless other is showing distress.

e.g.: Two boys were being punished and S watched them intently.

Other child is crying and S watches intently.

### Independence

n = independence. Score when S does something for himself under 2 conditions.

ni = S has asked or indicated need for help, then does it himself (usually after being ignored).

e.g.: 1. S says: "Teacher, will you help me with this?"

nr = refusing help. "I want to do it myself."

e.g.: 1. T offers to help child put blocks away and S refuses help.

2. T says: "I'll write your name on your picture" and S says: "I want to write it myself."

p = persistence.

pc = continually staying with or concentrating on an activity. S engaged in task or activity for one minute. Shows signs of continuous involvement during most of that time; doesn't look away from task much, continuously manipulates object or materials involved.

Task here is any activity involving making or building something or working with materials--drawing, painting, blocks, doll figures (if not used for fantasy) are examples.

Also include motor activities--climbing, swings, sliding boards, riding vehicles (if not interacting with others), etc.

Do not score running.

Do not score involvement in social activity.

Do not score during cooperation.

Score if S is playing or building something and T tells him to stop, when S continues to build--reflects involvement.

e.g.: 1. S manipulates clay fairly consistently and attentively.

2. S in motion climbing on bars (not scored when S just sits on top of bars).

3. S paints continuously for several minutes.

pd = persistence when having difficulty with something. S makes repeated efforts to accomplish a task in which a series of trials can be observed or in which he encounters difficulty. If S tried three or more times, score "pd" even if his efforts do not last the entire minute.

Also scored here is the continuation of an activity despite interruptions or interference from others.

e.g.: 1. S tries to rebuild block tower after it falls on floor.

2. S continues "cooking" despite sneak gun attack from other child.

## Aggression

aph = physical aggression. Hitting, banging, throwing, kicking, etc. at other person or toys C is playing with. Include clear threatening gestures.

e.g.: 1. S is swinging on curved ladder; C gets in her way; S kicks C.

av = verbal aggression. Name calling, teasing, jeering, threatening, angry talk to another, derogation. If both physical and verbal aggression occur, score both.

e.g.: 1. As C is trying to build something, S says: "You can't make it."

2. S says, "I'm gonna slap you."

3. S says, "Stacy's (painting) is ugly."

ac = commands. S commands someone in loud, angry tone. Do not score shouting or loud commands unless it is angry.

e.g.: 1. As S grabs at straw T is picking up, she says: "Give me that" in loud, sharp tone.

2. C bumps into S who is swinging. S says: "You better stop" in loud, angry tone.

anv = non-verbal aggression. Interference with other child's activity. Attempting to take something or grab something from O. Score even if not successful in getting it.

e.g.: 1. S tries to grab necklace from C.

2. S grabs at straw T is picking up.

3. S sits on other child in chair.

4. S takes C's cup before juice.

5. S stands in the way of C's tricycle.

ao = object aggression. Injury to objects, score only where not interpersonal and is intentional; banging, hitting, throwing objects. Score only when the act is vigorous or forceful or the child expresses anger facially or verbally.

e.g.: 1. S knocks over own block tower--appears deliberate.

2. S throws truck.

3. S kicks block on floor while looking directly at it.

4. S tries to break glass bottle on street by stomping on it.

5. S kicks suitcase on the street (was in her way).

apl = playful aggression. Physical or verbal aggression in a clear playful way. Score only where it is interpersonal. All parties involved must be smiling or laughing or clearly enjoying themselves. If you are in doubt, do not score this category.

- e.g.:
1. S and C were rolling on the ground together laughing and smiling while grabbing each other.
  2. S and C together, grinning. S punches C, they both laugh, C starts chasing S; they continue laughing and smiling.

at = Tattling or threatening to tattle. Telling or threatening to tell an adult or C about S's misbehavior. Do not score if tattling is elicited by a question from any adult.

e.g.:

1. "Teacher, he hit me."

2. "Oh, Teacher, he called you a dummy. You know who said it?"

ad = defending property non-aggressively. If another child attacks S, aggressively or tries to take something, S does not give up materials. May hold them tightly or move away from the other child, or verbally claim the materials. Score even if the other child finally gets objects.

e.g.:

1. C tries to grab clay from S. S holds onto clay, but is not aggressive.

2. C tries to take swing from S. S says: "That's mine."

r = Self-regulation

rt = tolerance of delay. Child waits patiently (i.e., without being aggressive or demanding) when something he wants is not immediately available (e.g., toy, piece of equipment, help from teacher). You may infer that S is waiting if he indicates he wants something verbally or with gestures or if O says something to indicate that he is waiting. It can be scored for previous minutes if you become aware that the S was waiting only after watching for a few minutes. Score once for each whole minute that child waits patiently. He may occupy himself with something else, but does not move away from object he is waiting for. If S finally gets what he is waiting for, score and consequences. (Score also if child verbalized positively about waiting.)

e.g.:

1. S asks C for clay and C refuses. S sits until C leaves clay, then takes it.

2. S asks for turn on tricycle or vehicle. Waits watching the object he wants.

3. S watching C paint while waiting her turn. T had told S she could paint when C was finished. When C was finished S started to paint.



4. S tries to grab toy from O. T tells S he cannot have it or O won't give it up. S then waits for toy non-aggressively.

ra = Accepting Responsibility

Carrying out activities such as picking up toys, cleaning up, distributing juice or food or other adult-like activities without direct adult supervision. This may occur spontaneously. Can also be scored if adult asks child to do something and child then continues the activity after adult leaves. Again, score once for each minute that works without adult supervision. If done jointly with other children, score as "ra-ic." If done with teacher, score "ra-it." If done with teacher and children, score "ra-ic" with object "B." If something adult-like is done for other children, score as helping and sharing.

- e.g.:
1. S picks up blocks and puts them away.
  2. After T stops wiping table, S continues wiping table and then wipes chairs.
  3. T tells S she can't have sand in kitchen corner. S spends some time trying to scrape sand off stove. T gives her brush and leaves. S brushes sand off--lots of effort.
  4. After T tells S to put truck away, S carefully takes it all apart (tinker toys) and puts in box. Then carries box to closet.
  5. S bringing in chair from outside.
  6. S helping to carry in table with teacher and other children. (Score "ra-ic" with object = "B.")

re = rule enforcement. Stating a rule to another child, stopping another from misbehavior (e.g., keeping other in a group if he is supposed to be there, telling other the right way to do something, telling other not to do something that is against rules). If S tells T about O's misbehavior, score as tattling. Don't score if it fits under verbal aggression (loud and angry tone). Include statements of rules in games. Do not include commands or reprimands unless they state a general rule that is part of the classroom rules or an instruction about behavior that a teacher has previously stated.

- e.g.:
1. During a walk, S says to C: "Always hold hands."
  2. "Don't eat your candy before your orange."
  3. In a "football" game S says: "You have to throw it from here."

rd = rule disobedience. S acts in a way has been told not to or against rule T has stated to group in general. If not sure about rule, don't score.

- e.g.:
1. S runs out of play yard.
  2. S leaves table during juice.

3. S leaves circle during group activity.
4. T tells all children to eat oranges before candy. S then takes piece of candy first.
5. After T asks children not to touch camera, S grabs at camera.
6. While trying to get S's to put away blocks, S continues to take them out of shelves.
7. S closes door after having been explicitly told not to.
8. S plays in section of playground T has told him to stay away from. He does this several times.

bs = Brings Recognition to Self

Making statements or gestures bringing recognition to yourself or accomplishments. Any verbalization of pride in own behavior, products, clothes, physical characteristics. Showing someone something S has made or brought. This does not include merely trying to get attention by calling out to someone. It must be an attempt to get recognition or praise.

- e.g.:
1. S shows T the puzzle he has completed.
  2. S says to T: "Look what I made."
  3. S is on bars and says: "Teacher, watch me."
  4. S is painting and says: "Look at mine, look at it."
  5. S is painting and says: "Now look at it; it's pretty now."

#### Fantasy

- f = fantasy.
- a. Pretending an object is something other than what it is in real life.
  - b. Taking a role. Pretending you are some other person, character, or object. S must behave as if he/she were person or character.

fc = collaborative (reciprocal) taking of roles. Two or more children (or S with an adult) take roles and relate to one another in those roles. Score conservatively. Score this only where S and O are both pretending to be someone or something and they share these fantasies with each other.

- e.g.:
1. Playing house with a designated mother, and father, and babies. Four children were playing in kitchen corner--long sequence in which three play mother, father, and baby.
  2. Playing on blocks; one boy is engineer, one is fireman; are pretending it's a train.

fr = role taking alone or without participation by others in reciprocal roles.

e.g.: Dressing up in adult clothes--"I'm going to a dance."

Rocking doll, patting, talking to it. Must be some indication S is playing mother. Do not score if S merely handling doll.

Two boys sitting in toy cars pretending to drive and making motor sounds.

fi = imaginative. Anything that does not fit in the role taking category that does fit definition of fantasy. If C is participating in this fantasy or sharing it, score C in object column. If S is engaging in fantasy alone of C is not participating, score no object. If a sequence of behavior is scored "fc" but some parts of it could be scored "fi," score it only as "fc" (e.g., two children are playing house. One explains that sand is a cake. Score only as "fc.")

e.g.: 1. S says that clay pieces she is pressing into puzzle are biscuits.

2. S is painting; says: "It's chocolate."

3. S pushes doll carriage, covers and recovers dolls.

4. Several S's are pretending a peg board is a birthday cake.

During fantasy activity, any behavior occurring that is ordinarily scorable in other behavior categories, score as a subcategory of fantasy. Note: The rule against scoring a category more than once per minute is modified here. You may score "fc," "fr," or "fi" plus these categories with modifiers during the same minute.

e.g.: fc - apl = playing in a group on pretend boat; captain and sailors

fc - el

fi - el = playing alone with a doll ("I like you dolly")

fc - ih = boy: "Want some food, baby?"

girl: (Mommy) stirs food on stove.

boy: "Mommy went shopping."

girl: "This is a bathtub."

fc - ih = boy: "There's your dog" (gives baby stuffed dog).

fc - av = girl: "Shut up baby."

fc - ia = baby: "Put me in bathtub."

#### Consequences of Behavior

Where there is a clear outcome of one of the behaviors scored, positive or negative, it is indicated in the column for consequences. The outcome should occur within one minute of the termination of the behavior or it should be clearly related to the behavior (e.g., by the teacher telling the child that she is rewarding or punishing him for a given behavior). Always mark the consequence category in the same row as the behavior even if the consequences occur later.

In the consequences are unclear, score as "no consequences."

If more than one type of consequence follows one behavior, score all consequence categories that apply.

General definitions of each type of consequences are given here. Then the types of consequences that apply to specific behavior categories are given. The general definitions apply throughout.

Consequences: Positive Social Interaction

+SC = gestures of physical affection (hugs, pats, embraces); verbal praise or expressions of admiration; declarations of liking.

+ST = physical affection; cuddling; praise for behavior.

For "ic" and "it" do not score simply because S engages in the interaction; score only if S's participation elicits responses from other children or from the teacher. Teachers may praise, explicitly welcome children into group actions, or single out individual children for positive attention. These are +ST's. For "ii," score +SC if other child or children join S as suggested, or if other children include S in their activity; 0 if S is ignored; -SC if S is actively rejected.

For "ih" score +SC if other child or children thank or give positive acknowledgment of S's help or contribution; +ST for positive comments from teacher or adults for helping or sharing.

"ih" may have negative consequences from children or from teacher if S is reproved or if other children refuse to play with an S who refuses to share. However, refusal must be explicitly contingent on nonsharing.

-M may be scored if teacher enforces sharing by taking away toys or objects.

For "ia," score +SC or ST if S's request is granted; 0 if S is ignored; -ST or SC if S is in any way reproved for needing help.

For "if," score +ST for praise from teacher contingent on S's suggestion; -SC for praise from a child. Do not score + consequences solely for compliance with S's direction. Score +M if S obtains or retains possession of some desired object as a result of his suggestion.

For "is" and "in," score +SC if other child or children express affection for S in the course of the interaction either physically or verbally. Do not score only because the interaction occurs; and score -SC if interaction sequence terminates with verbal aggression or a rebuff from other child or children. † and -ST are also possible: these are praise or rebuffs from teacher or adult for engaging in the interaction.

For much of this category, -SC or -ST is inappropriate or unlikely, as the fact that the behavior category is scored precludes many kinds of negative interactions. +M is inappropriate for much of the category, but can occasionally be scored when a group action results in the completion of a product which all admire (Halloween pumpkin, elaborate building project, good snack, etc.). Do not score -M when S shares, and therefore does not have some object to himself.

### Consequences: Persistence

pc: Score +SC if S's performance or product elicits praise or admiration from other children; 0 if neither; -SC if performance or product is derogated or criticized.

Score +ST if S's performance or product is praised or admired by teacher; 0 if neither; -SC if teacher criticizes or corrects.

Score +M if S creates product which apparently S is pleased with (out of clay, picture, etc.); -M if product is one which annoys or dissatisfies S.

Do not score merely for participation. Consequence must be one which is inferred on the basis of reactions of others, not S himself. In the case of Material consequences, go by S's apparent reactions to his own product: if he shows signs of satisfaction and pleasure, give him a plus rating; if he criticizes or destroys his own product, a -; and if he discontinues or shows no affect that you can see, a 0. Do not score Material consequences for motor activities, etc., where no product is completed.

pd: same as "pc."

### Independence:

For either "ni" or "nr," score +SC if child's act receives praise or admiration from other children; -SC if act is criticized or derogated; 0 if it is neither. + and - ST are judged likewise. + and - M are judged on the basis of child's apparent satisfaction with the results of his independent action.

### Consequences for Verbalization of Feelings

Definitions as usual except:

+ST = T responds to the expression of feeling by repeating or labeling the feeling, asking what is wrong, showing physical affection, or with other forms of conversation that are positive or neutral in tone.

T terminates or modifies scolding or other forms of disapproval.

+SC = C reacts with understanding, or positive feeling, or explains S's feelings to another, e.g., C replies: "I like you too." S says: "I want to lay down here" and C says to T: "He wants to lay down here."

S shows nonverbal signs of fear. C says: "He's scared."

-ST = T criticizes, disapproves, or otherwise shows negative reaction to S's expression of feeling, e.g., C crying loudly and T says: "OK, calm down. You're not gonna die."

-SC = C replies to expression of negative feeling with a return in kind, e.g., if S says: "I don't like you," C says: "I don't like you either."

## Consequences for Aggression

For aph, av, ac, and anv:

+SC = O discontinues aggression directed toward S as a result of S's aggression; O smiles, laughs, or engages in other forms of positive social interaction as a result of aggression.

+ST = T expresses sympathy, concern about S's feelings, asks what is wrong in gentle tone of voice. Note: If T also reprimands, score both +ST and -ST.

-SC = O directs verbal or physical aggression to S or tattles on S for aggressive behavior. Score this even if you are not sure who started aggressive interchange, so long as other child is aggressive in return.

C criticizes or disapproves of O's behavior. C stops a positive interaction with S as a result of aggression, e.g., C walks away after playing with S when S begins to shout and call C names.

-ST = T tells S not to engage in behavior and expresses disapproval. If S is actually punished, put -ST3.

T ends positive interaction with S as a result of aggression.

+M = S obtains some object, toy, or privilege such as a turn at an activity as a result of aggression, e.g., S pushes S off swing and then S plays on swing.

-M = S loses some object, toy, or privilege as a result of aggression, e.g., T takes away toy hammer after S swings it at another C.

O = S fails to get some object, toy, or privilege that he tried to take aggressively, e.g., S tries to grab tricycle, but C refuses to give it up.

ao: Usual definitions except:

-M = S destroys or breaks object by aggression (exclude cases where S looks very pleased).

+M = S overcomes obstacle by aggressive act, e.g., S bangs lid of tinker toys or kicks it; box comes open so S can play with tinker toys; S kicks door that is stuck and it opens.

apl: This presumes positive social feedback from other child or children. So do not score +SC here.

-SC = If playful interaction changes character and either S or C begins to cry, complain, become seriously aggressive, or otherwise depart from playful nature of aggression.

at:

+ST = T listens to S's tattling and either scolds or stops C from doing the thing S was complaining about; T sympathizes with S.

+M = S gets toys, object, or privilege from C as a result of tattling or threatening to tattle. C may give it to S directly, or an adult may intervene to give object to S, e.g., "Teacher, it's my turn and she took the bike;" T then makes O give S the bike.

O = T does not respond to tattling and S does not get whatever he is complaining he lost.

ad:

+M = S retains object that he/she has defended.

-M = S loses the object that he/she tried to defend either because C takes it or T makes him give it up.

#### Consequences for Understanding Others

For ur, us, and uc:

+ST/

+SC = O talks to S about what has happened in a positive or neutral tone of voice, may touch S in a comforting or affectionate way, may praise or express admiration for statements made by S, may smile in recognition of what S has said (be sure the smile directed towards S is in response to the specific behavior scored), or O may discontinue aggressive behavior directed towards S.

-ST/

-SC = Usual definitions.

+M/

-M = Usual definitions.

ug: Usual definitions, except +ST/+SC = not appropriate.

ua:

+ST/

+SC = O talks to S about what has happened in positive or neutral tone of voice, may touch S in comforting or affectionate way.

-ST/

-SC = S receives a negative response from child being watched.

+M/

-M = Not appropriate.

## Consequences for Self-Regulation

rt:

+ST/

+SC = S receives praise or admiration about waiting; O may talk about walking with S in positive or neutral tone of voice.

-SC = A more insistent child shoves in front of S.

+M = S gets what he's been waiting for; may receive special privileges.

-M = Usual definition, or may never get a turn.

ra:

+ST/

+SC = Praise, admiration, talking to S about the job that was done, thanking S for doing the job.

-ST = T may be critical of the way something was done (S may have spilled something).

-SC = Aggression directed at S for cleaning, putting away something C wants.

+M = S may get "goodies first" because of the job done, or may receive special privileges.

-M = Don't score putting away toys or other objects as a loss. This is not -M.

re:

+ST/

+SC = C does what S says in rule (score only if it's clear that's what other child is doing). O may reiterate rule stated by S. T may praise S for stating rule. O may discontinue aggressive behavior directed towards S.

-ST/

-SC = Usual definition.

+M/

-M = Usual definition.

rd:

+ST = T talks to S about what has happened in positive or neutral tone of voice.

+SC = Admiration from other kids, imitation of S's misbehavior, joining in and supporting S's behavior. Score whether S is or is not the leader (S does not have to be the first to start the behavior).

+M/

-M = Usual definition.



### Consequences for Bringing Recognition to Self

+ST/

+SC = Score when S receives praise or admiration from O. Also score if O looks or watches when S requests this.

-ST/

-SC = Usual definition. Do not score -S when S receives no response from O (lack of recognition is scored as no consequence).

+M/

-M = Usual definition.

### Consequences for Fantasy

Consequences rarely occur for fantasy by itself. Do not score +SC for mere participation in fantasy by other children. This is implied when you score "fc" or "fi" with C as object.

+ST = T praises, gives warm attention to S's imagining or fantasy activity, e.g.,  
T says little girl looks pretty all dressed up to go to dance or takes her so other adults can see her.

Do not score consequences within a role taking sequence if they occur as part of a role.

+SC/

+ST = Others watch S's fantasy with enthusiasm, admiration, e.g., if S is putting on puppet show and others watch.

+SC = S has asked to play a particular role and is allowed to play it, e.g., S says: "I want to be daddy," and plays daddy.

### Positive Social Consequences

+ST = Positive Social Consequences from T.

+SC = Positive Social Consequences from C.

1. S receives praise, admiration, appreciation or physical affection from an adult or a child for a behavior. Do not score smiles unless they occur with some other form of positive feedback, or
2. O discontinues aggression or negative behavior as a result of S's action.

### Examples:

ih +SC = S helps another child by pushing on swings. O smiles at S and thanks S.

ra +ST = S puts away toys at appropriate time. T praises S for doing so.

rt +ST = S waits patiently for juice or food. T praises S.

- ii +SC = S suggests a cooperative activity. C responds by joining in the activity.
- ic +ST = S participates in a cooperative activity initiated by another. T praises S for doing so.
- bs +ST = S attempts to show someone something he has made or is doing. T looks and either smiles or praises S.
- ia +ST = S asks for help with something. T attempts to give help.
- if +SC = S suggests an alternative activity for C. C accepts that activity and moves toward it.
- at +S = S tattles on another child. T punishes or scolds that child.
- el +ST = S states a feeling. T responds by sympathizing, asking questions to explore reasons for feelings or by discontinuing aggressive or other negative behavior.
- apl -SC = S engages in mutual hitting with other child.
- it +ST = S participates in group cooperative activity. T directs special attention to him for his participation (i.e., says his name or directs comments to him).
- us +ST = S asks T if she wants him to pick up toys. She responds that she doesn't need those picked up. (Take note: This is positive even though T refused his offer because she responds pleasantly and answers his question.)
- pd +ST = S accomplishes a difficult task such as putting on own jacket and buttoning. T praises S for doing so.

### Negative Social Consequences

-SC = Negative Social Consequences from C.

-ST = Negative Social Consequences from T.

S receives verbal, physical aggression or disapproval from another. Include scolding from teacher.

O discontinues positive interaction as a result of S's behavior.

### Examples:

aph -SC = S hits another, O hits back or yells at S in loud, angry or derogatory manner.

ih -SC = S attempts to push C on swings, C yells at S to stop.

rd -ST = S leaves juice table at wrong time. T tells him to sit down or reprimands for leaving table.

rel -SC = S disobeys rules. Another child, tells T about his misbehavior.

iā -ST = S asks for help with something. T refuses to help.

e1 -ST = S states a feeling, e.g., "I don't like him." T reprimands by telling him he shouldn't say that.

ii -SC = S attempts to initiate cooperative activity, but O refuses to participate.

### Positive Material Consequences

+M = Positive Material Consequences.

S receives a toy, materials, food, privileges or opportunities to engage in activities that are usually desired by children as a result of a behavior.

#### Examples:

aph +M = S attempts to take toys or materials from O. He actually gets whatever he tried to take.

uq +M = S asks O for materials. S gets materials as a result.

ih +M = S brings toys from shelves for C to play with. C gives S some of toys.

ad +M = S refuses to give toys or materials to a C who is trying to get them. S retains toys.

-M = Negative Material Consequences.

S loses or fails to get toys, food, materials, privileges or opportunities for activities that he apparently wants. Include deprivation if T forbids S to play with a toy as a result of behavior or if T isolates C.

#### Examples:

aph O = S attempts to take toys from C. C keeps toys.

ad -M = S refuses to give toys or materials to O who is trying to take them. S loses toys to O anyway. O either takes them directly or T makes S give them up.

rt -M = S takes food before he is supposed to. O makes him put food back or takes from him.

O = No consequences.

## Instructions for Group Observations

Circle Time

1. Rate children in the order of the class roster. If the activity is one in which there are pauses, do not rate during the pauses.
2. It is not necessary to rate every teacher-instigated activity. This rating is intended only for the part of the program the teacher sets up as a whole class activity. Some teachers might not set it up as a circle-- what is wanted here is a rating on whatever the teacher sets up as a full class activity, so that all children are expected to participate, at least in the beginning.
3. Rate the children for the first time at the beginning of circle time, when they are assembled and the teacher has begun whatever activities she is using. Look at each child long enough to judge his behavior and rate him, then go on to the next. Do not linger over individual children. Try to give about 10 seconds to each, and don't concern yourself if you happen to notice that a child has changed his behavior after you rated him.
4. There is a tendency to use the middle categories of the scale. If you notice a child either being disruptive or showing exceptional enthusiasm (the top and bottom categories) as you are rating nearby children, assign him or her the rating immediately. It is unnecessary to rate the child again when you come to his name on the list.
5. If another observer is present, don't confer and sit far enough from each other that you do not see each other's ratings. This is important so that we can get good tests of the ratings.
6. After you have rated the children once, note the time and describe the activity at the head of the rating sheet. Then rerate the children, using the same categories, describing their behavior at a second point in time. Use the number 1 for the first rating, a 2, for the second, and so on. You should rerate the children as many times as you can complete the entire class roster, for each rereating noting the time you begin and the activity in progress at the top of the sheet.
7. Coordinate your ratings with those of the other observer (if there is one) so that you begin each series of ratings at the same time. Note the time that circle time is concluded at the top of the sheet.

Pick-up

1. Rate only one pick up period per day. Choose a time when the teacher announces that the day's program requires picking up and putting away. This may be at the end of the day, when it is time to move indoors or when it is time to move from indoors out. Use only periods where all children are expected to participate.
2. If you have a coworker rate the same pick up period.
3. Use the following categories to describe the children's behavior
  - rd3 Obstructing efforts to pick up continues to take out toys.
  - rd Refuses to stop or to give up toys or equipment until teacher insists.
  - 0 Does not participate.
  - ra-it Assists in routine pick up by working with teacher's supervision.
  - ra-ic Picking up or cleaning up cooperatively with other children. This must be joint activity, not merely both picking up different sets of materials.
  - ra3 Picking up or cleaning up without direct supervision from T.
4. Do not be concerned with how effective the child seems to be - rate his or her efforts if the child seems to be trying.
5. Write the names of all children on the clean up observation form. If you have a prepared list of names, cross out names of children not present and add any names at bottom that are not on list. Look at each child briefly - long enough to score his behavior at the moment - then check the appropriate column on the scoring sheet for the first observation. You may observe S's in whatever order you see them. If two S's are near one another you may score them simultaneously. Be sure you have a score for each child. Then begin a second observation following the same procedure.

Rest time

1. Start your stopwatch at the time the teacher announces that it is time to get out mats or cots (or whatever preparations are usually made for rest time). Time the rest time quieting or soothing period from this time until the room is quiet enough that the teacher is no longer engaged with the children or is resting herself.
2. Using the class roster, if you have one, scratch off the names of children who are not present. For the remainder of the children, record the time the child lies down on his or her mat or cot. Some children may lie down and then get up again. Record the time the child first lies down as nearly as possible.
3. Quiet, obedient children are easily missed. Try to sit where you can see all corners of the room, and if you have to move to make sure, try to check the children out without making noise yourself.
4. Assign one of the following ratings to each child at the end of the quieting period.
  - a. Child on mat or cot: no admonishments from teacher beyond first instruction, only routine attentions, and no disruptive activities.
  - b. Quiets after teacher's admonishments or soothing--minor interactions with other children or playing with nearby toys.
  - c. Quiets only after extended individual attention or much disruption (crying, protesting, running around)
5. Be guided by the teacher's behavior. That is, if a child is quiet enough so that the teacher gives no more than routine attention, give him an a, if the teacher directs only one or two comments at him (or her) a b, and if the teacher spends much time and effort with the child a c. Different teachers will have different standards as to what is acceptable. The rating should be based on what seems to be acceptable in the room that the child is in and what the teacher of the class takes as quiet enough.
6. The second time listed at the head of the sheet, the time all children are quiet, should be the time the room is quiet enough that the teacher either lies down herself or stops working with the children. At this time, record the time at the top of the sheet and assign ratings of a, b, or c to all children on the basis of their behavior throughout the time the children were getting ready for their rests. As soon as you have given the children ratings, leave the room. It is not necessary to stay for the whole rest period.

Appendix H (continued)

Group ratings are scored as follows:

Circle Time:

- 1=Overt disruptive activity or leaves group
- 2=Inattention, no overt disruption
- 3=Follows teacher
- 4=Follow teacher: facial expression shows interest
- 5=Follows teacher: adds to teacher's instructions

The ratings taken on a given day were averaged to provide a mean for the day. The number of ratings included varies according to the length of the circle time.

Pick Up Ratings:

- 1=Obstructs pick up
- 2=Continues playing or refuses to stop
- 3=No contribution
- 4=Works with T's supervision
- 5=Works cooperatively without T's supervision
- 6=Works alone without T's supervision

The ratings on a given day were averaged to provide a mean for the day. The number of ratings included varies according to the number of children the rater was able to rate easily -- in large classrooms, the raters tried to rate as many children as possible by moving around the room to see where the action was.

Rest Time Ratings:

The amount of time the child spent before getting down on his mat or cot (to the nearest 1/2 minute) was multiplied by the behavior rating

- 1=a=complies with teacher at first instruction
- 2=b=quiets after teacher's admonishments or soothing
- 3=c=quiets only after extended attention or much disruption

A constant of 1 was added to all times to eliminate 0's. A low score therefore indicates an obedient child.

Locate rating for a given subject and write date of observation on tabulation sheet.

The numbers on the rating sheet indicate whether a rating is 1st, 2nd, 3rd, etc. For each rating, determine whether

- a. T present or absent.
- b. Food present or absent.

The first behavior rating in the final column represents the first observation, etc.

Write the number representing the observation (first, second, third) in the column on the tabulation sheet representing the behavior rating scored.

If 'Not in place' checked, write the number of the observation in that column.

Write the total time involved in all observations in which the child was scored "in place" and the behavior was scored rt, ra, is, or any other positive behavior. Most observers give a breakdown of the amount of time covered in each observation. If they do not, simply divide the total time in equal parts (or use the total if all the observations are scored in place and rt, ra, is.)

Repeat for all observations for a given child.

Note: There are generally two of these ratings by the same observer for each date because they did one at Snack Time and one at Lunch. Record both. We will not try to separate them.

If there is more than one observation for the same period by different observers, record both and bracket them to indicate they are the same time.



Appendix H (continued)

Snack Time and Meal Time Ratings

1. When T indicates that children should gather for snack or meal, start your stopwatch. Start a new recording sheet, and write 0 or whatever time your stopwatch says above column for first observation.
- 2) Write in names of children present, or use list already prepared (when available). If you have prepared list cross out names of children not there, and write in any new names.
3. Observe each child on the list, one at a time, for a brief interval. You may observe them in any order, just as everyone has been covered when you finish. You should look at the child briefly--long enough to see how his behavior can be scored for that moment: then record scores in the column for the first observation. If two children on the list are close enough together that you can observe them at the same time you may do that so long as you can see each well enough to score his behavior.
4. The observations for each child consist of the following:  
Check first whether he is waiting in the appropriate place for the snack or meal or not. This may be a table in the room or he may be in line to go to a room for a meal.  
If he is "in place," check the following:

1. whether or not T is present.
2. whether or not food is present
3. behavior category that applies:
  - a. rt if S is waiting quietly
  - b. appropriate category of positive social interaction if S is socializing while waiting.
  - c. appropriate category of aggression if S is aggressive while waiting.
  - d. rt-neg if he attempts to eat before supposed to.
  - e. ra if helping to distribute napkins, eating utensils and the like.

If he is not "in place," do not record in other columns unless he is still helping to pick up or put away toys. In that case, score appropriate category from the Pick Up ratings (ra or other).

5. When you have scored all children once, record time you finished. Then attempt to estimate whether the food is going to be served within the next five minutes. If it is clear that it will be more than five minutes, then return to the procedure for five-minute observations of individuals and observe the next child on your list for five minutes. Be sure to keep your stopwatch going, however, because we want a record of time from the beginning to the end of the waiting period. When you have completed the five-minute individual observation, do another snack and meal time observation following the procedures described above. Record the time on the watch that has passed since the beginning of the first observation after circling the 2nd observation on the sheet. If there is still no sign that a meal is imminent, do another five-minute individual observation, then another Snack and Meal Time observation, and so forth.

If it appears that the meal is nearly ready to be served when you complete a Snack and Meal Time observation then continue to another Snack and Meal Time observation immediately. Stop observation when the children are allowed to eat.

## Appendix I

## Delay of Gratification Instructions

## List of Materials:

4 toys  
cardboard box  
Bell  
Pretzels  
Marshmallows  
Screen  
Cake tin  
Playdough and blocks

## Instructions for Delay of Gratification Measure

Seat child.

Show child the four toys. Show how each one works. THESE ARE SOME TOYS THAT YOU AND I WILL PLAY WITH PRETTY SOON. Show how two toys work. After demonstrating the toys, put them in cardboard box. Put box in corner of room.

SOMETIMES WHEN I AM PLAYING WITH CHILDREN HERE, I HAVE TO GO BEHIND THAT SCREEN. WHEN I DO, YOU CAN BRING ME BACK BY RINGING THIS BELL. LET'S PLAY A GAME WHERE I GO BEHIND IT AND YOU BRING ME BACK BY RINGING THE BELL. (Let child practice ringing bell) I'LL GO BACK THERE NOW. AND YOU RING THE BELL TO BRING ME BACK. (Go behind screen so you are out of sight, and come back immediately when bell rings.) GOOD. NOW, LET'S DO THAT AGAIN. (Repeat going back and forth at least 4 times or until child clearly understands.)

Sit down beside child and get out cake tin. NOW LET ME SHOW YOU WHAT IS IN HERE. IT'S A SURPRISE. (open cake tin). Look. THERE'S A PRETZEL AND TWO MARSHMALLOWS. WHICH ONE WOULD YOU RATHER HAVE? (Let child choose one he prefers.) OK, I'm GOING TO PUT THEM BACK WHILE I TELL YOU HOW THIS GAME WORKS. (Close cake tin and put at back of table, out of reach.)

REMEMBER I TOLD YOU THAT I SOMETIMES HAVE TO GO BEHIND THE SCREEN? I HAVE TO GO BACK THERE NOW. BUT YOU CAN PLAY WITH THIS PLAY DOUGH AND THESE BLOCKS WHILE I'M GONE. IF YOU WAIT UNTIL I COME BACK BY MYSELF, YOU MAY HAVE THE (Preferred object--marshmallow or pretzel.) IF YOU DON'T WANT TO WAIT UNTIL I COME BACK BY MYSELF, YOU CAN RING THE BELL AND BRING ME BACK ANYTIME. IF YOU RING THE BELL YOU CAN'T HAVE THE (preferred object). BUT YOU CAN HAVE THE (nonpreferred object). (Repeat and rephrase this 2 or 3 times to be sure child understands it).

CAN YOU TELL ME, WHICH DO YOU GET IF YOU SIT AND WAIT UNTIL I COME BACK BY MYSELF?

IF YOU WANT TO, HOW CAN YOU MAKE ME COME BACK? IF YOU RING THE BELL AND I COME BACK, WHICH DO YOU GET?

OK, I'M GOING BACK THERE NOW. REMEMBER YOU CAN PLAY WITH THE PLAY DOUGH AND THE BLOCKS WHILE I'M GONE. (Sit behind screen so that you can see child, but he cannot see you)

Start stopwatch as soon as you go behind screen.

Score child's behavior according to instructions until he rings bell or until 10 minutes have passed.

If child rings bell, record time from stopwatch. Then go immediately to the table. THERE, YOU SEE YOU MADE ME COME BACK. NOW YOU MAY HAVE THE (nonpreferred reward.) Give it to the child and let him eat it.

If child does not ring bell, return after 10 minutes. Record 10 minutes on data sheet. THERE, I CAME BACK BEFORE YOU RANG THE BELL. NOW YOU MAY HAVE THE (preferred reward.) YOU HAD TO WAIT A LONG TIME FOR THAT, DIDN'T YOU?

NOW WE CAN PLAY WITH THE TOYS. Get out toys and play for a few minutes.

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