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Using Group Viewing of Prosocial
Educational Television for
Social Skills Training in the Daycare Setting

Ida Eva Zielinska

A Thesis

in

The Department

of

Education

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts at
Concordia University
Montreal, Quebec, Canada

March 1992

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ABSTRACT

Using Group Viewing of
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Social Skills Training in the Daycare Setting

Ida Eva Zielinska

A systemic approach to designing instruction aimed at
enhancing the social skills of young children was taken in
this thesis. The following were analyzed: (a) the social
context (from which the need for such instruction emerged);
(b) the preschool child learning system; (c) the chosen
setting (the daycare system and its possible influences); (d)
the learner (developmental and other constraints); and (e)
possible solutions (based on learning theory), and means of
evaluation. Based on this systemic conceptual analysis, a
teacher implemented intervention program, drawing from Social
Learning Theory and Cognitive-Developmental Theory, aimed at
encouraging prosocial behavior and cooperation among children
in the daycare setting, was designed and tested.

Children (aged 3-5 year) from eight daycare centers in
Montreal (n=150) were part of the study. Intact groups (2
settings randomly assigned to condition) participated in
eight days of intervention consisting of group viewing of
video-taped segments of *Sesame Street*, followed by
participation in activities.

The evaluation of the program consisted of a 2 x 2 x 2
factorial, quasi-experimental, pretest-posttest field study

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with video-type (prosocial, cognitive), activity-type (cooperative, individualistic), and sex as the three factors. The measures were caregiver ratings, free-play observations, a perspective-taking ability test, a situational altruism test, and two qualitative measures aimed at highlighting the context during program implementation.

Analysis of covariance (pretest and age as covariates) revealed a significant main effect for video-type on prosocial behavior, and a significant interaction between video-type and activity-type on antisocial behavior. Results suggest that prosocial modelling can be useful in encouraging prosocial behavior in the daycare setting. The use of enactive prosocial training without modelling support may have contributed to an increase in antisocial behavior. Several contextual-setting characteristics contributed to this result, suggesting that enactive training is particularly sensitive to such influences.

This exploratory systemic analysis can be of potential benefit to educators interested in educational problems originating at the socio/environmental level, and to designers of specific instruction aimed at social skills training of the young child. Based on results, design, installation and diffusion of discrete social skills training modules or resources would be the next step in the process started.

ACKNOWLEDGEMENTS

ideas, as well as a stimulating opportunity to refine existing thoughts. I will always consider it a fundamental part of my education.

And finally, a heartfelt thanks to my parents, Czesia Bychowska-Hajmovicz and Zenon Zielinski, whose standards of hard work and striving to do one's best under any circumstances, have proved to be the most valued of gifts that will last a lifetime.

Thank you all.

DEDICATION

This work is dedicated to the spirit of collaboration that dwells in each of us, but sometimes needs a little push in order to emerge.

There may be more which unites us, than separates us. The challenge is to accept our collective fate, and learn to work with it, rather than against it.

This thesis is also dedicated to my four year old son,
Zaz,
who patiently and cheerfully attended daycare while this study was being planned and implemented.

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INTRODUCTION

Preamble

This thesis was conceived and written with the following definition of educational technology in mind:

> Educational technology ... is an area of study and practice concerned with all aspects of the organization of educational systems and subsystems whereby resources - human, material, electromechanical, monetary and knowledge - are allocated to achieve specified and potentially replicable educational outcomes. (Mitchell, 1981, p.12)

Mitchell (1981) expands on this definition by proposing that an educational technologist should have:

> ... the capability of translating an educational problem into a solution by employing not only the knowledge of education but also the conceptual framework and skill of other relevant fields. This may entail the translation of an educational problem into a form that can be dealt with by specialists in other disciplines, and vice versa. (p. 19)

How to put this definition into practice can perhaps best be illustrated by presenting a parallel drawn by Charters (1945), between the fields of engineering and education. The practical steps taken by an "educational engineer" are as follows:

First, the educational engineer accepts an idea to develop, a problem to solve, or a question to answer ...[The] next step is a logical definition of the problem.... When a problem has been defined, the educational engineer analyzes it to discover the factors that must be considered. Each of the factors requires analysis sufficient to bring it under control.... [The educational engineer then] proceeds to construct [the] project by carrying out the operations which have been specified in the manner decided upon.... The final phase of the engineering method in education is evaluation. When the operation is completed, it is tested to see if it fulfills its function adequately.... (p. 36-37)

Another aspect of the analogy drawn which is important is that educational technology, like engineering, is a profession which requires "both an acquired theoretical training and a recognition of responsibility to the public" (Charters, 1945, p.31). The educational technologist is there to serve the educational needs of society.

According to the author's understanding, the distinguishing mark of the educational technologist is not necessarily in the *types* of problems which are undertaken, or in the manner with which they are portrayed. It is primarily in the *approach* to tackling an educational problem where the experience and skill of the technologist are revealed. Figure 1 presents a systemic model of potential sources of

educational technology problems.

Figure 1. *Systemic model of the potential sources of educational technology problems.*
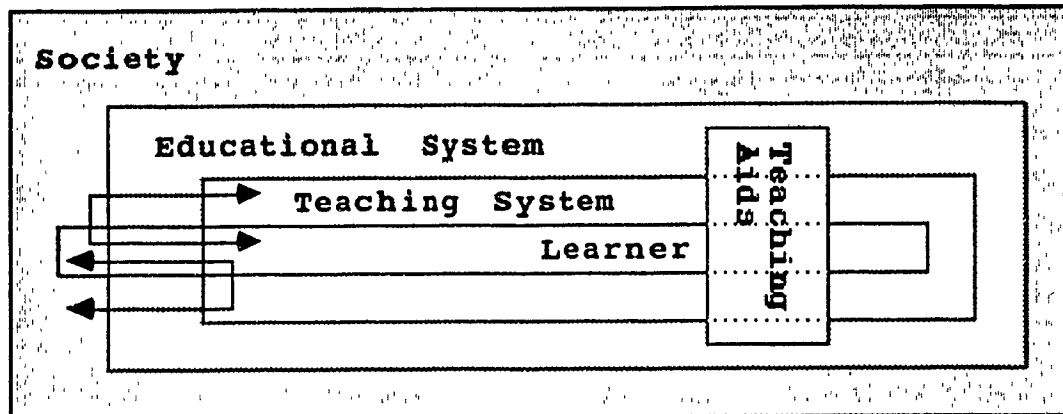
Source: Steering Group on Educational Technology (undated).

This framework suggests, as indicated by the arrows, that whether the point of departure for identifying an educational technology problem is from society in general, or from the level of the student, the effects of any intervention will eventually filter through the entire system. In this way:

> ... the planning and construction of teaching aids [is part of]... a context which is wider than that which has usually governed their production... It becomes part of planning the curriculum, which reduces the risk that the teaching aids will be an end in themselves. (Steering Group on Educational Technology, undated, p. 25)

The planning of curriculum is influenced by the goals of the larger governing educational system, which responds to the needs of society, and so forth.

The problem addressed in this thesis began at the level of society, and was humanistic. Essentially, it stemmed from the opinion that in order to counterbalance antisocial trends prevalent in society, the need for increased social awareness exists and needs to be recognized. In agreement with Solomon et al.(1985), it was decided that the problems of "inadequate levels of social responsibility and concern for others' welfare, accompanied by excessive self-centeredness and social alienation....[might best be dealt with developmentally, by] ...strengthening children's tendencies to behave in more socially positive ways" (p.371). Since the learner group to which the intervention was geared was the young child, the resulting analysis draws largely on developmental psychology literature. Figure 2 presents the systemic model as applied to the particular problem addressed in this study.

<u>Figure 2</u>. *Systemic model of the targetted problem.*
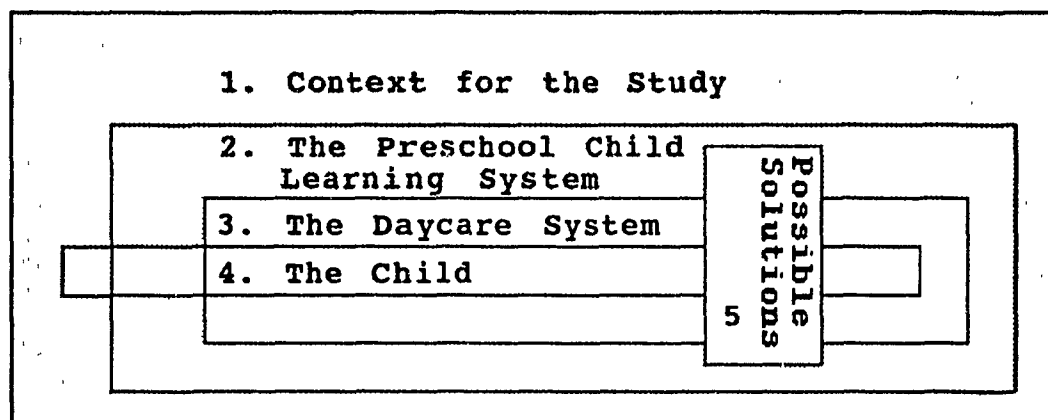
Context for the Study

We are entering an age where cooperation, sharing of energy, resources and knowledge, and peaceful resolution of conflict (on the individual, cultural, national or international scale) are becoming increasingly important necessities of daily life. In fact, a highly adaptable and efficient set of social skills and a markedly global consciousness may be prerequisites for our collective survival (Butler, 1976).

Perhaps the traditional Darwinian formula for survival needs an overhaul in that success may now lie in networking, joining forces, and creating opportunities, rather than in competing with one another for existing ones. In fact, we may come to view egotism not as a right, but as an antisocial failing. One could even question if egotism is to be viewed as the predominant biological human attribute at all. Hoffman (1978) presents a case for viewing it in terms of a polarity, that of egoism-altruism:

> To the extent that this is true, it is obviously meaningless to ask whether biology dictates values. More fundamentally, virtually all distinctive human attributes appear to have evolved over a period of 1 - 3 million years when the world was far different than it is now. It therefore seems absurd that our biological

inheritance should determine what is to be valued in our contemporary world; or even that attributes that were adaptive then are necessarily adaptive now. (p. 335)

From this viewpoint, it seems that as we enter the 21st Century, it may be time to adjust the existing balance between our egotistical and altruistic tendencies.

With this as the underlying goal, and accepting the proposition that increased social awareness might be achieved if the process of its development is understood and enhanced, (Mussen & Eisenberg-Berg, 1977), preschool children (three to five) were chosen as the target age group for which social skills training strategies were devised. The systemic approach to educational innovation was adopted (Havelock, 1973) as the procedural framework.

Briefly, in response to a perceived social need, the purpose of this thesis was to do an exploratory field study which would: (a) Taking into account current realities of the preschool child learning system, diagnose where social skills training innovation might be feasible and effective; (b) respecting developmental and practical constraints and influences, generate a design solution; (c) with an eye to benefit, praticability and diffusibility, evaluate the solution, and finally; (d) with the aim of adapting the solution and delineating directions for future research, derive implications from field testing. Figure 3 graphically outlines the systemic approach to innovation and which steps

were within the scope of this thesis.

Figure 3. *The systemic approach to innovation.*

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Legend: *LITERATURE REVIEW* / *METHOD* / *RESULTS & DISCUSSION* / □ *SCOPE OF THESIS*
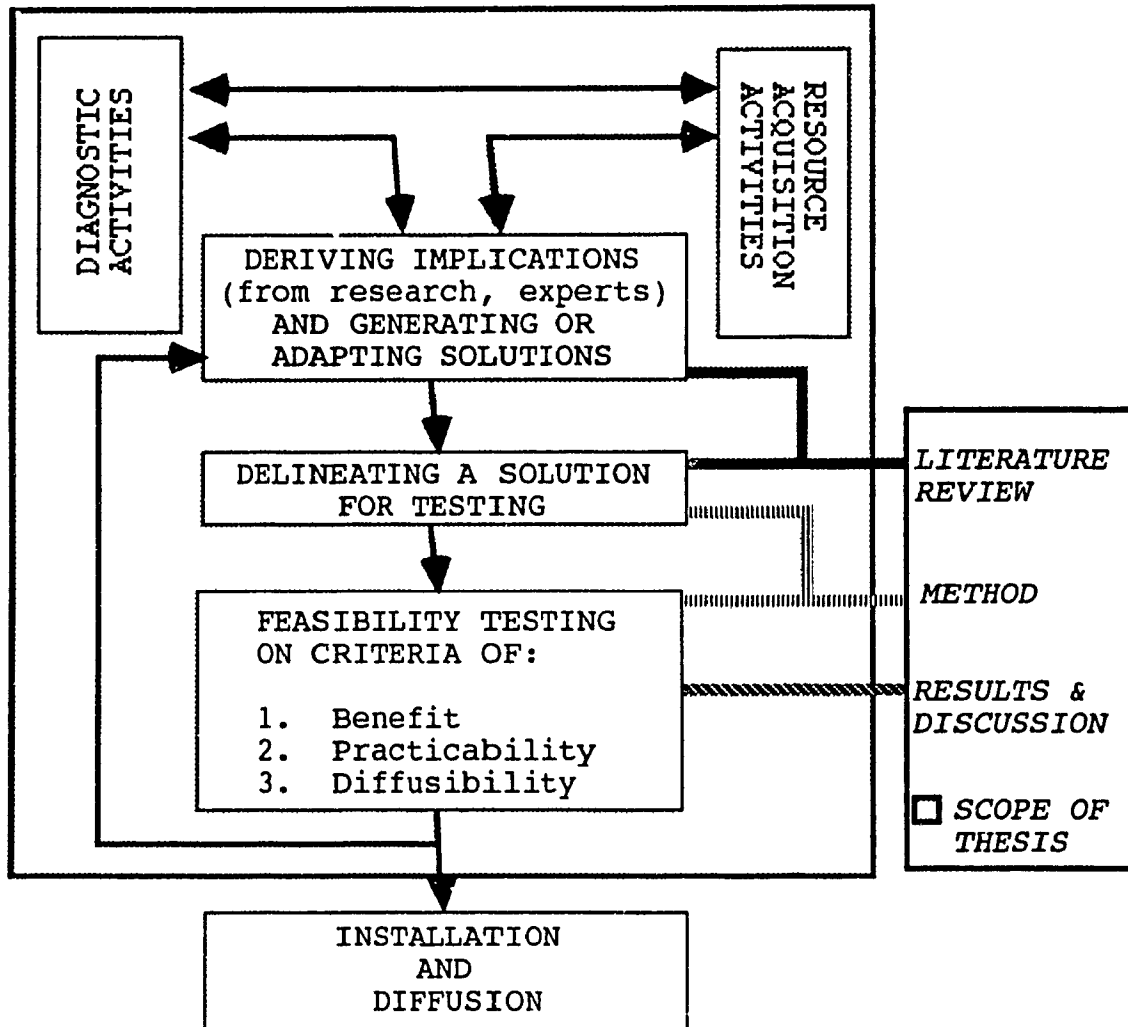
Note. This figure is based largely on a diagram found in Havelock (1973, p.99). Certain adaptations have been made to make it fit more closely to an empirical research study model, rather than a client-centered design, evaluation, adaptation and installation model.

The Preschool Child Learning System

Given the preschool-age child as the targeted learner group, the first step in attacking the problem was to take a look at the learning system, gauge ᴠ ₌t the influences (inputs) are, and diagnose which of these might be most amenable to intervention. Figure 4 presents a systemic overview of potential formative influences on the preschool child.

Figure 4. *Formative influences on the preschool child.*

INPUTS

DEVELOPMENTAL LEVEL
PERSONALITY ATTRIBUTES
PHYSICAL CHARACTERISTICS

FAMILY: PARENT(s)
        SIBLING(s)
        RELATIVE(s)

PEER GROUP & FRIENDS

DAYCARE or PRESCHOOL:
    TEACHERS
    PROGRAM,
    SETTING etc

SOCIO-ECONOMIC FACTORS

CULTURE: RELIGION
         ETHNIC TRADITION
         LANGUAGE

ENVIRONMENT:
    COMMUNITY
    NEIGHBOURHOOD

PLAY MATERIALS: TOYS, GAMES, BOOKS etc.

THE PRESCHOOL CHILD

MASS MEDIA:
    TELEVISION
    FILM
    PRINT

OUTPUTS

EVOLVING:

PERSONALITY
BELIEFS
ATTITUDES
EXPERIENCE
KNOWLEDGE
SOCIAL BEHAVIOR
INTERESTS
CAPABILITIES
etc.

Although one would expect the family and home to be of primary importance in this learning system, currently, this may not be the case. The conventional family, with working father and child-rearing mother, has been quietly eroding over the years. Due to economic pressures and committed career pursuit by women, full-time maternal child-rearing is on the decline. In its place, an increasing reliance on daycare and other child-care arrangements is evident. In 1988 it was estimated that more than 50% of children under the age of six had working mothers, and the number is rising daily (Davis, Ibanez-Friedman & Martin, 1990). Clearly, professional caregivers have taken over a large share of the responsibility for child-rearing. As a result, inadvertently, we are being forced to define, understand, and design optimum "mother care" (Pence, 1989), so that it can be simulated within these non-home settings (Caldwell, 1986; Morrison, 1989; Scarr, Phillips & McCartney, 1989; Sroufe, 1988; Zigler & Hall, 1988).

The informal preschool education received in the home would traditionally touch on developmental-cognitive aspects, socio-cultural aspects, and perhaps creative and moral aspects among others. Currently, it is the cognitive aspects which are being stressed by parents as they worry about their children "keeping up" with expected demands from a competitive society (Elkind, 1981; 1987). Math, reading, multiple language skills, "the earlier the better" are

encouraged. Indeed, some educators have put forth the notion that children's rate of development is being accelerated, and as a result the role and design of early education need to be reassessed (Zimiles, 1986).

Daycares, in trying to appease parents and keep up with the accelerating pace of education, may be designing their programs with a predominent emphasis on cognitive skills. However, this trend towards favoring cognitive development may be at the cost of other aspects of a child's development. Social development is one area which may not be getting enough attention. In fact, recent research examining the effects of out-of-home care on children's development, suggests that daycare "graduates" may be exhibiting increased aggressive behavior by the time they reach school age (Bagley, 1989; Belsky, 1986; Finkelstein, 1982; Haskins, 1985; Vandell, Henderson & Wilson, 1988).

These findings emphasize the fact that designers of preschool-care programs may need to pay more attention to the social development of children. It is possible that accommodating young children in large heterogeneous peer groups (reflective of diverse cultures and socioeconomic realities) may be putting demands on their evolving social skills which they are developmentally incapable of handling. At the same time, the availability of examples of appropriate behavior and of personal attention from an adult (which is socializing in itself) is limited; children attending daycare

have to contend with shared attention from one adult taking care of many, as opposed to the type of constant personalized attention that a parent or family member can provide.

One could argue that the requisite social skills training will still occur in the home. Unfortunately, this may no longer be the case. While in the past the home may have provided many opportunities for social interaction, at present this can be questioned. Families are smaller, affording less sibling interaction. With a move away from the extended family structure, with the underlying opportunities for social interaction and support it provided, families are now more isolated. There are a growing number of single parent families, as well as an abundance of mobile families who do not establish roots within any one community. Comparatively speaking, the immediate family environment is becoming socially impoverished.

Looking beyond the family, there is evidence of a larger, more pervasive "socialization void" affecting us all (Kagan, 1985). Television has taken over many social roles (friend, teacher, etc.), often leading to a situation where children view social interaction, rather than partake in it (Murray, Rubinstein & Comstock, 1972). Furthermore, from frequent television viewing, the world may appear aggressive, dangerous, and unfair to a young viewer, potentially leading to mistrust and reluctance towards social interaction (Singer, Singer & Rapaczynski, 1984).

Taking into account existing characteristics of the preschool-child learning system, the daycare setting appeared to be the optimum environment within which to intervene. A social skills training intervention within the daycare system would allow for group learning, as well as potentially contribute towards satisfying an exisiting educational need within that system.

Research Problem

In order to counterbalance the cognitive concentration evident in many daycare programs - and to contribute towards alleviating some of the consequences of the perceived "socialization void"- the specific aim of this thesis was to study ways of enhancing the social awareness and social skills of children within the daycare setting, focusing primarily on encouraging prosocial behavior and cooperation. An effective yet unobtrusive intervention approach was sought, one which would be easily implemented by the daycare teachers themselves.

LITERATURE REVIEW

The goal of the literature review was to derive implications from research towards delineating a practical solution for feasibility testing. Four general topic areas were addressed: (a) the setting, (b) the learner, (c) the solution, and (d) the means of evaluating the effectiveness and feasibility of the solution.

The Setting: Daycare Effects on Social Development

Since the goal of the intervention was the facilitation of prosocial behavior in the daycare environment, existing daycare effects on young children's social development, and the possible, although often unintentional, causes of these had to be considered.

As society moves away from long-held traditions of childcare, it is to be expected that concern about the effects of change will be reflected in the kinds of research that is conducted. Researchers who have investigated the possible negative effects of the increasing reliance on out-of-home care on child development, particularly socio-emotional development, are many (Belsky & Steinberg, 1979; Clarke-Stewart, 1989; Crowther, Bond, & Rolf, 1981; Gamble & Zigler, 1986; Heist, 1980; Rutter, 1981; Thompson, 1988). Indeed, studies have shown that "daycare children ... are

inclined to be more assertive and aggressive both physically and verbally, are less conforming to adult standards, and are less cooperative" (Belsky & Steinberg, 1978, cited in Schenk & Grusec, 1987, p. 231). Consequently, many studies which aim at facilitating the prosocial behavior of young children in daycare, do so in reaction to social problems which may have been caused by daycare enrollment itself. Although it is proposed that social skills training should be a major cornerstone of preschool education, much of the literature would suggest that it is a cure for artificially created ills.

The literature reveals many detrimental effects of daycare. Some researchers (Belsky, 1986; Belsky, 1988) attribute the antisocial behavior found to the weakening oi mother-child attachment caused by the daily separation, especially for those children who are enrolled before they reach the age of 12 months. Others suggest it may be a result of children having to fend for themselves within a large peer group, in an impersonal environment, with relatively little adult-child contact - compared with what might be expected with a parent at home. These researchers tend to look for differential effects between types and quality of out-of-home care, where child-caregiver ratios, group size, physical set-up, caregiver and/or director's experience and other such factors take on importance (Holloway & Reichhart-Erickson, 1988; Moore, Snow, & Poteat 1988; Phillips, McCartney, &

Scarr, 1987; Vandell, Henderson & Wilson, 1988). Haskins (1985) and Finkelstein (1982) attribute the increased aggressiveness of daycare children upon entering kindergarten to the cognitively-oriented curriculum of the daycares they had attended. Still others tend to look at parent variables in the equation, in that parenting styles, home stress factors, and maternal affective states are predictive of how children behave (Bagley, 1988; Benn, 1986; Clark-Stewart, 1988; Howes, Rodnig, Galluzzo & Myers, 1988; Lamb, Hwang, Bookstein, Broberg, Hult & Frodi, 1988; Roke & Marcus, 1980; Roopnarine & Hempel, 1988; Weinraub, Jaeger, & Hoffman, 1988).

There is a parallel body of literature which concentrates on the positive outcomes of out-of-home care. The large peer group is seen as a rich playground providing the opportunity for the development of various aspects of social competence (Field, Masi, Goldstein, Perry & Parl, 1988; Musatti & Panni, 1981, Schindler, Moely & Frank, 1987). In fact, extensive group experiences may result in greater social maturity in young children, where the increased potential for social interaction becomes the source of social skill, and not merely its product (Fein & Moorin, 1980; Mueller & Brenner, 1977). Even when aggressive behavior in daycare graduates is discerned, it is seen as a symptom of precociousness, self-confidence, or other "positive" qualities (Bagley, 1988). Those who adhere to this line of

thinking see daycare as an efficient stepping stone to the school system, which may actually help prepare children (Anderson, 1989). This could be especially true if one were to encourage positive peer interactions while in daycare, which have been seen to be predictive of later peer acceptance and teacher approval - both instrumental to satisfactory school adjustment (Ladd & Price, 1987; Levy-Shiff & Hoffman, 1989). Looking beyond the school years, "the importance of early peer interaction for the development of positive outcomes on adult life adjustment has been well documented" (McEvoy & Odom, 1987, p. 242).

In examining the literature on daycare just presented, it is apparent that although some concern has been expressed about the possible detrimental effects of early group care on young children's socio-emotional development, short of governmental policies offering child-care alternatives to families, the number of daycare enrollments will continue to grow. Since the aim was to nurture social competence in preschool children, the daycare environment was the most feasible setting within which to do so.

Daycare provides a setting that is rich in opportunities for social interaction - much more so than the typical home. The interaction being offered is predominantly peer related - which is advantageous in that social skills are best tested among equals, and not between child-adult where other factors such as compliance with authority figures come into play.

Where negative effects are found, they can be solved. Finkelstein (1982) provides a solid example of how the effects of a daycare program which was somehow encouraging aggression in children, were turned around through the introduction of a social-curriculum intervention aimed at enhancing social skills.

Unfortunately, not all aspects of care are readily open to manipulation. Quality of care cannot be improved easily, since it is affected by budgetary constraints and governmental policies concerning minimum requisite training of caregivers, caregiver-child ratios, and regulations concerning health and environmental standards. Nor can extraneous elements, which account for negative daycare effects for some children, be easily affected. For instance, attachment patterns and child personality attributes, both heavily influenced by home and parent variables, are less open to intervention. Figure 5 presents a systemic model of factors which influence the social behavior and social development of children attending daycare.

Evolution of program design in response to emerging needs and research evidence appeared to be a feasible direction for the intervention to take. However, before being able to generate social skills training solutions for the daycare setting, learner characteristics had to be addressed.

Figure 5. *Systemic model of factors influencing the social behavior and development of children attending daycare.*
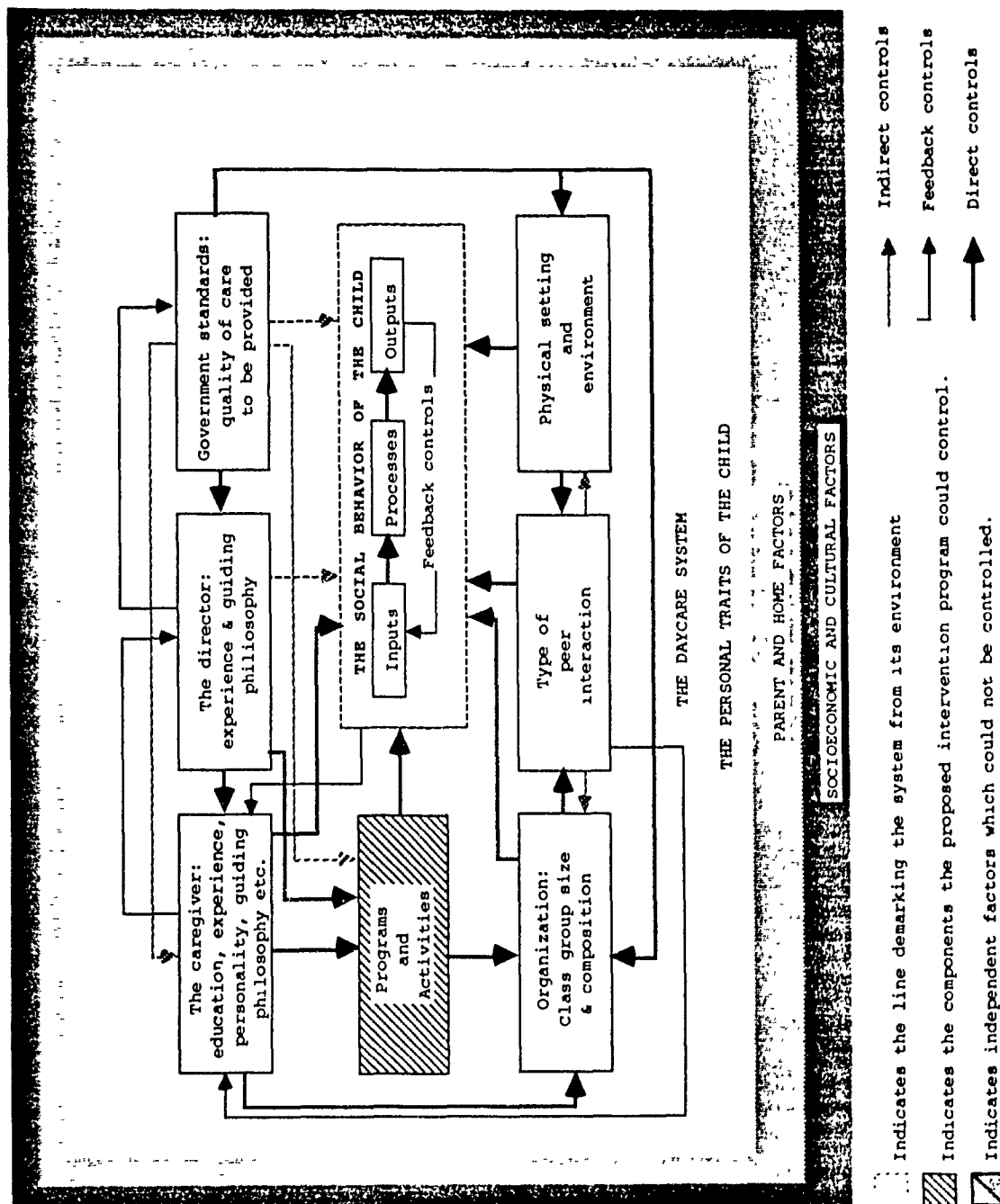
Note. Model adapted from Schoderbek, Schoderbek and Kefalas (1985, p. 22).

The Learner: Theoretical Perspectives on Young Children's

Prosocial Behavior

In analyzing young children's propensity for prosocial behavior, aside from considering personality and other individual-specific factors which might make some children more prosocial than others, one must first consider developmental effects. In fact, some theorists have suggested that developmental influences may dictate if young children are capable of exhibiting prosocial behavior at certain ages (Piaget, 1932).

> Many theorists maintain that empathy, sharing another's emotional responses, is a prerequisite of prosocial behavior, a motivational process that mediates between perceptions of others' needs or distress and prosocial acts. In defining empathy, some stress only cognitive components (comprehension of social situations or role-taking ability) while others underscore affective arousal, the matching of one's own feelings and emotions with someone else's. (Mussen & Eisenberg-Berg, 1977, p. 126)

Empathic ability has also been referred to more technically as role-taking ability and perspective-taking ability (Deutsch & Madle, 1975). The latter is seen to embrace three categories of related skills, namely perceptual perspective-

taking (seeing from another's point of view), cognitive perspective-taking (understanding what another is thinking), and affective perspective-taking (understanding how another might be feeling) (Shantz, 1975).

Developmental psychologists such as Piaget (1932) have maintained that young children are by and large egocentric and do not have enough cognitive maturity to take another's perspective. According to this position, cooperation, effective communication and prosocial interaction among young children is difficult, if not impossible to alter. These views are in dispute however, since recent research shows that children have better perspective-taking abilities, at earlier ages, than was previously believed. According to this evidence young children are developmentally capable of empathy and prosocial behavior (Black, 1981; Borke, 1971; Borke, 1975; Hart & Goldin-Meadow, 1984; Hobson, 1982; Johnson, 1982; Kraus, 1984; Light, 1983; Marvin, Greenberg & Mossler, 1976; Mossler, Marvin & Greenberg, 1976; Zahn-Waxler, Radke-Yarrow & Brady-Smith, 1977).

When looking for specific research evidence of the role of empathy as a precursor to prosocial behavior, it appears that studies with adult subjects have been more successful than studies with younger subjects; results with children are inconclusive (Eisenberg & Miller, 1987; Strayer & Schroeder, 1989; Underwood & Moore, 1982). However, the inconsistency between theoretical predictions and research data may be due

to the measures used to assess children's empathy, and not the premise itself. The most commonly used measure of empathy is one where children are told brief stories, accompanied by pictures, about a child who is involved in an emotion-provoking event. They are then asked to report how they themselves feel (Fesbach & Roe 1968, in Lennon, Eisenberg & Carroll, 1986). More often than not, empathy as measured by such an instrument is not related to prosocial behavior. However, Lennon, Eisenberg and Carroll (1986) found that preschoolers' nonverbal responsiveness to another's distress was positively associated with their prosocial behavior. Although the use of such non-verbal measures of empathy is relatively new, findings tend to support the positive relationship between empathy and prosocial behavior. Perhaps instead of focusing on affective arousal (as with the non-verbal measures) or cognitive understanding components of empathy (as with the self-report picture/story indices), more emphasis should be put on the motivational components, which would dictate if a given individual acts on the impulses and information received from the former two.

Hoffman (1979) bypasses developmental constraints and claims that even infants are capable of empathy, exhibited as "empathic distress" where they experience directly the painful emotional state of another. It is only with self-other differentiation, which is more likely around age two, that there is the awareness that the distress is in the other

and not the self, thus enabling the child to attempt action aimed at relieving the other's discomfort (Johnson, 1982). This is consistent with Eisenberg, McCreath and Ahn (1988) who found that children as young as two years old were capable of empathy. However, those who responded with anxiety (personal distress) rather than sympathy-sadness towards the distress of another, were more likely to elicit prosocial interventions from others on their behalf, rather than intervene themselves. Thus, although they were capable of empathy, they were still having difficulty (as would an infant) in differentiating themselves from others, and were too upset by the experience to intervene prosocially.

Strayer and Schroeder (1989) found differentiation in the type of distress children responded to; children were most likely to respond to the sadness or fear of another, and least likely to respond to another's anger. Thus, although capable of empathy, by helping selectively and not responding to another's angry distress, they were perhaps showing another type of egocentrism, that of avoidance of potential pain to themselves should the other's anger become directed towards them. Or perhaps it is easier to 'solve' a sad problem, than an 'angry' one.

Zelek-Caplan and Hay (1989) found evidence that beliefs as to social responsibility may further affect attempts at prosocial intervention on the part of children; they found that three to five-year-olds, although capable of

understanding and discerning peer distress, chose not to intervene when an adult was present. The formation of social responsibility norms can perhaps be guided both by observation as well as moral reasoning. Eisenberg-Berg and Hand (1979) followed through on this assumption and found that although children's helping-comforting behavior was related more to sociability than moral reasoning, spontaneous sharing was significantly related to a needs-oriented moral reasoning. Not surprisingly, such reasoning can be interpreted as an empathic type of moral judgment. Therefore even if the ability to perceive another's need is there, the motivation, confidence or ability to intervene prosocially may be lacking.

Looking past developmental effects, personality, self-concept and other individual characteristics also come into play in children's prosocial behavior (Denham, 1986). Very often the children that are the most active and assertive, are also the most sociable, capable of initiative, and thereby capable of prosocial action (Bagley, 1988; Phinney, Feshback & Farver, 1986; Radke-Yarrow & Zahn-Waxler, 1976). Although a higher level of self-confidence (which usually results in increased sociability) can lead to negative self-gratifying behavior, it can also increase the likelihood of helpful, cooperative and responsible behavior (Cauley & Tyler, 1989; Marcus, 1980).

In the same way, there was a link found between popularity and prosocial behavior, in that the most popular children were the most prosocial, while the least liked were the least prosocially inclined (Marcus, 1980; Rubin, Daniles-Beirness & Hayvren, 1982). It is evident that peers can help socialize both aggressive behaviors as well as positive interaction styles (Eisenberg, Cameron, Tryon & Dodez, 1981). Peer expectations and support can lead to better self-image, which in turn can lead to a desire to act on the behalf of others.

Mood and affective state have also been found to play a part in prosocial behavior. There has been evidence of a significant link between happy affect and successful cooperation, helping, and empathic responses among young children (Bryan, 1975; Chapman, Zahn-Waxler, Cooperman & Iannotti, 1987; Marcus, 1987; Strayer, 1980). Perhaps the theoretical notion proposed by Hoffman, namely that empathy and thus prosocial behavior are most likely when individual ego needs are satisfied, ought to be investigated further (Denham, 1987; Hoffman, 1975; Strayer, 1980).

Figure 6 presents a model of the factors influencing young children's prosocial behavior that emerged from the literature review. An assessment was made as to which factors offered some degree of control in the daycare setting, and opportunity for having direct impact on social behavior. Factors such as self-concept offered a somewhat oblique

approach, where social behavior would be addressed indirectly. Others, such as experience and ability (knowing the appropriate action), offered a more direct route.

Figure 6. *Factors influencing young children's prosocial behavior.*

Type of distress demanding a response

Expectations from others

Satiation of personal ego needs

Experience & Ability (knowing appropriate action)

Popularity peer support

Self-confidence

THE PROSOCIAL BEHAVIOR OF THE CHILD

Mood or affective state

Inputs → Processes → Outputs

Feedback controls

Personality

Moral reasoning

Self-concept

DAYCARE SYSTEM

Beliefs regarding social reponsibility

Perspective-taking ability: Perceptual Cognitive Affective

Developmental level

☐ Indicates ι gree of independence (factors not easily open to intervention).

☐ Indicates degree of control (factors open to intervention at daycare).

Note. Model adapted from Schoderbek, Schoderbek and Kefalas (1985, p. 22).

In reviewing the literature presented one could summarize that young children are developmentally capable of taking another's perspective, and thus of being prosocial, but they may not always be motivated to do so. The next step was to ask if it is possible to encou¨aye these types of social behaviors, and if so, what means have been attempted.

The Solution:

Review of Possible Intervention Approaches

A review of the literature reveals that there are two approaches to the design of an intervention aimed at facilitating the prosocial behavior of young children. The first is founded in Social Learning Theory (Bandura, 1986), and proposes the provision of models of behavior along with accompanying reinforcement (i.e., reward or punishment, which can encourage or inhibit shown behaviors). Modelling can also be effective without the provision of overt reinforcing mechanisms. The second approach is founded in Cognitive-Developmental Stage Theory (Piaget, 1932; Kohlberg, 1969; Hoffman, 1976), and proposes the provision of opportunities for taking on the perspective of another. Such training is said to lead to various cognitive processes which decrease the amount of egocentricity, thereby making concern about the welfare of others and prosocial intervention increasingly possible. It is worth considering both approaches.

Bandura argues that "most human behavior is learned by observation through modelling" (1986, p.47). His model can be presented in either an interactive way, within the immediate environment (as would a real person), or by means of a symbolic representation (words or images for instance). Most systematic interventions use the latter method. Perhaps this is only because it is easier to control, since other

means can be equally effective.

Radke-Yarrow, Scott and Zahn-Waxler (1973) found that "children with nurturant caregivers who had modelled helping in both symbolic and live distress gave more help, verbalized more sympathy, and were more consistent" (p.240) in their altruistic behavior - which was the aim of the study - than those who had been in the company of a non-nurturant caregiver. In a later study Zahn-Waxler, Radke-Yarrow and King (1979) also found a similar effect on the altruistic behavior of children as young as 18 months, in response to their mother's empathic caregiving, spontaneous modelling of altruistic behavior, and affective induction. Thus, the influence of being in the company of an exemplary adult cannot be denied. However, although such methods may be effective, they are difficult to systematize in that individual interaction between a specific adult and child is involved. Caregivers could be trained, mothers could be counselled, but it is doubtful if results would be consistent, and a method could be reduced to a reproducible form. Also, although no one would argue against the value of individual attention, it is often difficult to achieve in a crowded daycare setting.

There is a substantial body of literature which addresses the provision of models of behavior in a filmed or videotaped form. Research has shown that even short viewing by children can result in their imitating the behaviors shown

(Bandura, Ross & Ross, 1963; Bandura & Walters, 1963; Bandura, 1986; Murray, Rubinstein & Comstock, 1972). But whether the imitated behavior will persist and be generalized to other situations, is not guaranteed. Furthermore, results from research studies focusing on the transfer of antisocial behavior are far more conclusive than studies focusing on prosocial behaviors.

The reasons why aggressive behaviors seem more easily transferable through modelling than prosocial ones are unknown. There appear to be hidden mechanisms at work which make one type of modelling more seductive than the other. Perhaps aggressive behaviors - which are normally discouraged by adults - when modelled, lessen inhibitions towards imitation. Positive behaviors, encouraged rather than inhibited from a very early age, do not have the same immediate appeal for replication. This is not to say that they are not absorbed, simply that they tend not to be revealed so readily.

Friedrich and Stein (1973) found that children from lower socioeconomic backgrounds showed an increase in prosocial interpersonal behavior following exposure to prosocial TV programs, while children from higher socioeconomic backgrounds did not. This was explained as being a result of a "socialization void" prevalent in the former group, which rendered the behavioral models more novel and therefore transferable. There appears to have been a

novelty effect of viewing prosocial programs for those not previously exposed to such models of behavior. Meanwhile, in the same study, the viewing of aggressive programs caused a decrease in tolerance of delay and rule obedience (both instrumental to interpersonal aggression) only for those children who were initially above the median in aggression. Those below the median were not affected. Thus, there was a reinforcing effect of viewing aggressive programs for those already highly aggressive. Different demographic and personality factors seem to have more of an effect on the imitation of modelled aggressive actions, than of modelled prosocial actions. Such individual characteristics cannot be ignored in attempting to explain observational learning processes - or design educational programs based on them.

Sometimes a simple age difference will account for success or failure. Lipscomb, Larrieau, McAllister and Bregman (1982) found that models of charitable behavior induced young children to donate more than neutral or selfish examples, while older children were not affected. In interpreting this finding, Peterson (1982) suggests that it is a lack of knowledge of social norms in the younger children which accounted for this effect, in that "young children are not yet aware of where, when, and what ... behavior is appropriate, and thus ... may accept the model's behavior as a definition of appropriateness..., not as a substitute for internal beliefs" (p. 283). This would

coincide with the traditional developmental psychology position that young children are not developmentally capable of holding certain socially-oriented internal beliefs. Instead, when young children see a novel behavior modelled, they adopt it as a viable behavioral alternative, not necessarily understanding the full meaning of the action. With repeated exposure to behavioral models, socially-oriented internal beliefs are developed.

When attempting to encourage positive social development by providing behavioral models, producing an "imitation-of-particular-behaviors" response is not enough. One would hope to instil fundamental understanding, which would lead to a generalization of modelled behaviors to new settings. Research has shown that exposure to aggressive modelling can lead to both specific imitation and generalization (Murray, Rubenstein & Comstock, 1972). In fact, even aggressive acts modelled in unfamiliar environments have been known to generalize to the regular preschool environment. Although there is evidence that children can imitate modelled prosocial behaviors (Coates, Pusser & Goodman, 1976; Forge & Phemister, 1987; Friedrich & Stein, 1973; 1975a; 1975b; Moore, 1977; Sprafkin, Liebert & Wicks-Poulos, 1975), the behaviors learned do not easily generalize to new situations (Leifer, 1975; Paulson, 1974). It has been found that even when the intent of a message is prosocial (as in teaching conflict resolution skills), children are just as likely to

imitate the "conflict" as the "resolution" behaviors modelled (Silverman & Sprafkin, 1980). Thus, in trying to model a type of cooperative behavior, it might be more effective to simply show an example of such a cooperative encounter, rather than show a problem situation, that finally resolves in the same cooperative behavior.

Perhaps in attempting to affect prosocial behavior, the provision of models is not enough incentive for transferal. Accompanying reward structures may not be the answer either since "although a number of investigators have found that material rewards increase the occurrence of helping, sharing, and cooperation in the immediate context, ... they may also undermine subsequent prosocial motivation in situations where rewards are no longer forthcoming" (Fabes, Fultz, Eisenberg, May-Plumlee & Christopher, 1989, p. 514). Whether the effect of non-material rewards, such as adult approval, on the behavior of young children is more lasting, is hard to measure. The potency of self-reward mechanisms in the form of posit_e affective state as a result of prosocial, particularly altruistic, action is even more difficult to measure. Nevertheless, self-reward cannot be dismissed as a viable alternative. Reward incentives are not the only means for reinforcing social behaviors, however.

Various training strategies, which allow for the rehearsal and/or enactment of modelled behaviors, have been found to be especially effective in strengthening the effects

of viewing. Friedrich and Stein (1975a) were able to enhance the impact of prosocial TV viewing by providing post-viewing training. This training comprised verbal labelling activities through stories or discussion, and the simulation of actions with the help of puppets. It was found that program impact was strongest when the viewing and training were combined. In another study (Friedrich & Stein, 1975b), it was found that program content could be enhanced by the provision of environmental cues, in the form of relevant play materials, within the children's post-viewing environment.

Although both the experimental design and the level of dependency between the viewing and training components of these studies did not allow for a comparison of the effects of the modelling-alone conditions, with that of the training-alone conditions, a study by Murray and Ahammer (1979; Ahammer & Murray, 1979) made such a comparison. The aim of the study was to facilitate altruism in children. To achieve this objective, a prosocial TV viewing condition was compared with a variety of training conditions. An analysis of the effects of TV-viewing-alone compared with three training conditions (cumulative in design with role-playing, empathy and helping components) on helping, sharing, cooperation and cognitive role-taking ability, revealed that only the training conditions produced an increase in targeted behaviors, the TV-viewing-alone condition did not. However, there may have been a bias in favor of the training

conditions implicit in the design of the treatments. The training components were very carefully constructed to specifically address the objectives of the study; the viewing component comprised existing television shows, with no manipulation on the part of the researchers in order to match objectives.

There have been several studies which have looked at the use of training strategies alone, without modelling support, to increase the prosocial behavior of young children. The use of such techniques is founded in Cognitive-Developmental Stage Theory (Biehler & Snowman, 1986; Piaget, 1932; Kohlberg, 1969; Hoffman, 1976), which attributes the capacity for prosocial behavior to underlying developmental-cognitive (Piaget), or moral (Kohlberg) schemata, with their associated levels of perspective-taking ability. This theoretical framework suggests that in attempting to increase prosocial behavior, perspective-taking ability should be enhanced. This can be done through opportunities for role-play, verbal socialization procedures, induction, preaching, and other forms that provide perspectives separate and different from that of the child.

The effective procedures used by Murray and Ahammer (1979) to increase targeted prosocial behaviors included role playing and taking turns switching roles, role playing with stress on emotional awareness or empathy, as well as opportunities for the practising of helping behavior. Ianotti

(1978) also found that two different role-taking experiences resulted in an increase in altruistic prosocial behavior in six-year-old children. Staub (1971) was equally successful in encouraging sharing and helping behavior with the use of role-playing training. Feshbach (1975) reviewed evidence from several other studies which indicates that role-playing procedures can be effective in facilitating helping and sharing behaviors, as well as in enhancing competence in social comprehension. Such role-taking exercises, aimed at fostering prosocial behaviors, can stress affective experience (encouraging empathic understanding) or social cognition.

Several studies have shown that role playing need not actually be performed, but may be rehearsed cognitively. For instance, the use of inductive methods in the form of verbal instructions, was found to be effective in decreasing the aggressive behavior and increasing the positive behavior of a group of three to five-year-old children (Zahavi & Asher, 1978). Essentially, the consequences of inappropriate behavior were explained to children on an individual basis, if the situation called for it. The affective component, of how their actions might make someone else feel and how *they* would feel if they themselves were the recipient of the inappropriate action, was stressed. Howard and Barnett (1981) were able to increase the donating behavior of four to eight-year-old children by encouraging them to focus on the

feelings of less fortunate others. This strategy was more effective than simply encouraging the children to think about the plight of the others, without mentioning their feelings. All of these studies strongly suggest that empathy can increase the likelihood of prosocial behavior.

Rushton (1976) proposes that the theoretical frameworks of Cognitive-Developmental Stage Theory and Social Learning Theory may actually be alternative conceptualizations of the same processes, and thus might be seen as moving towards integration, rather than opposition. "One theory conceptualizes role play and modelling as providing different perspectives for the observer that increase (their) role-playing ability. The other theory focuses upon the learning and rehearsal of specific new forms of behaving" (p. 913). The components are the same, although the point of origin is different.

Most of the studies which comply with a Cognitive-Developmental theoretical framework in attempting to foster prosocial behavior, stress internal processes within the individual. The individual is seen to be locked into developmental stages, and thereby is not always open to every socializing influence from the environment. It is the interaction between mental structures and environmental events which shapes cognitive development, which in turn affects the type of social behavior that is exhibited. These mental structures are said to be changing, maturing,

proceeding along a universal, predictable sequence of stages. The social development process originates in the individual, so to speak, in that the individual acts on the environment.

By contrast, Social Learning Theory would suggest that "most human behavior is learned, moulded, and shaped by environmental events, especially rewards, punishments, and modelling" (Mussen & Eisenberg-Berg, 1977, p.28). Social development is thereby governed by the influences of social norms. The direction is the reverse of that espoused by the Cognitive-Developmental perspective, in that the social environment dictates to the individual by providing examples of action, and they respond to the consequences of undertaking the "behavioral ideas", with internal thoughts, feelings, and beliefs. Within this framework, conscience is a conditioned anxiety response and not part of an evolving moral code.

Regardless of the point of origin of social development, no one disputes the interactive nature of the process, where both the individual and the collective are instrumental elements. Perhaps the two theories should be viewed not as opposing, but complementary constructs, one superimposed over the other. The most recent conceptualization of Social Learning Theory by its founder Bandura (1986) moves towards a reconciliation of perspectives; when analyzing the subprocesses of observational learning, not only the attributes of the model are now being scrutinized, but the

attributes of the observer as well. These subprocesses are attention, retention, production and motivation. Within this conceptualization, cognitive capabilities, internal standards and arousal level (among other characteristics), all have a mediating effect between the modelling of events and their potential behavioral matching. Some of these characteristics are also associated with perspective-taking ability and developmental stages of moral reasoning, which are the hallmarks of the Cognitive-Developmental perspective.

Cognitive-Developmental theorists have also been moving towards a reconciliation. Currently there is less of a tendency to view cognitive ability and moral reasoning as rigid developmentally-hierarchical stages (Biehler & Snowman, 1986), which would theoretically isolate the individual from opportunities for social learning during certain periods.

In conformity with this theoretical reconciliation, some theorists and researchers have designed programs aimed at increasing the prosocial behavior of young children to include both an observational component (to show possibilities when social norms are not yet known), as well as an enactive component. This would provide opportunities to actually experience the types of behaviors shown, with the accompanying affective and cognitive arousal that rehearsal might induce (Ahammer & Murray, 1979; Friedrich & Stein, 1975b; Hoffman, 1978; Murray & Ahammer, 1979). Figure 7 presents a systemic model of social development from both

theoretical perspectives; the components which were chosen to be part of the instructional design for this study are highlighted.

Figure 7. *Systemic overview of theoretical guidelines for instructional design aimed at enhancing social development.*
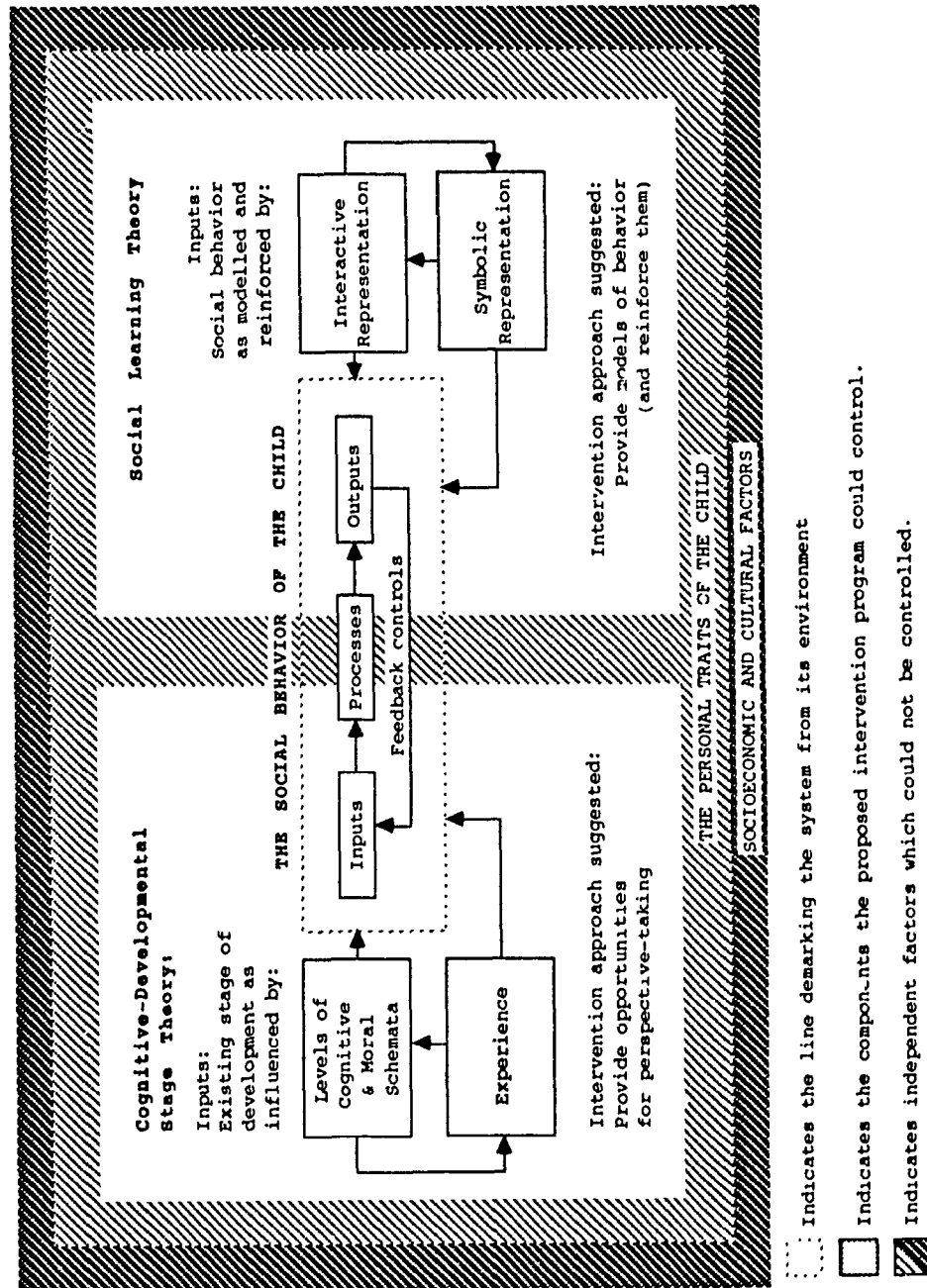
Aside from the practical considerations, the fact that daycare was the chosen setting for this study offered theoretical advantages as well. Since social development is an interactive process, it might best be nourished in a group context. There has been evidence to suggest that group viewing of socially-oriented programs may be more effective than individual viewing. Moore (1977), in reviewing research on the effects of television on the prosocial behavior of young children, points out that studies which have collected data on home viewing of *Sesame Street* and *Mister Roger's Neighborhood*, both having prosocial content, did not "suggest consistent or marked effects of home viewing on school [social] behavior" (p. 63). Meanwhile, evidence has shown that even short-term viewing while in school frequently had an effect. Perhaps it is the added social desirability of exhibiting the behaviors modelled, since they are being sanctioned by the teacher (an authority figure). Or, perhaps it is the influence of peer interaction.

Sproull (1973) found that group viewers of *Sesame Street* exhibited a large number and variety of verbal, non-verbal, targeted and non-targeted modelled behaviors, while single viewers much fewer. "One can assume that peer interaction is a context that promotes behavior change and maintenance through selective reinforcement" (Hartup, 1983). Furthermore, in a group situation peers themselves act as behavioral models. Bruffee (1982) refers to such group viewing as

Collaborative Learning Television, and presents research evidence to support the notion that the very nature of television viewing is social. Bruffee proposes that the viewing of educational television should always be done within a group context, thereby allowing the full strength of the medium to emerge.

Not only can group viewing of models of behavior be beneficial for social development, but group activities can be nourishing as well. There has been research evidence suggesting that group games can result in positive socialization, particularly if the games or activities are cooperative rather than competitive (Foster, 1984; Orlick, 1978; 1981a; 1981b; 1983). Fein (1981) reviewed studies on pretend-play behavior and presented evidence to support the notion that group endeavor can be beneficial. It was found that spontaneous pretend-play and guided story-enactment can reduce egocentricity in young children, thereby improving their perspective-taking and cooperative problem-solving abilities. Connolly and Doyle (1984; Connolly, Doyle & Reznick, 1988) observed the play behavior of three to five-year-old children and found that the pretend aspect of social play was particularly enriching. During observed pretend-play episodes, children were found to engage in longer more enjoyable interactions with larger groups, involving more play involvement and reciprocity than during observed non-pretend play episodes.

Intervention Approach Taken

Benefit to the Learner

In light of the research literature reviewed, the intervention approach taken with respect to maximum benefit to the learner, combined guidelines derived from Social Learning Theory and Cognitive-Developmental Stage Theory. It was aimed at triggering **Observational Learning**, as well as **Enactive Learning**, and was implemented in a group context.

Models of prosocial behavior were provided by showing videotaped segments from *Sesame Street* - a familiar children's television show produced by the Children's Television Workshop (Higgins & Sullivan, 1990), and aired extensively across North America (in fact, world-wide). Subsequently, children engaged in activities and games designed to provide the opportunity for rehearsal of prosocial and cooperative behaviors, through role-taking (and switching), game-playing, and group endeavor.

Observational component. *Sesame Street* has a consistent mosaic structure, with many short segments sequenced into a one-hour format. The instructional goals of the show include symbolic representation (letters, numbers, words), cognitive processes (reasoning and problem solving), the child (self-esteem), and the social and physical worlds (environment)

(Felsenthal, 1974; Lessor, 1972; 1974). There seems to be a conscious philosophy behind the editing style, in that as much "discontinuity" between segments as possible is provided; themes reappear across segments, but length and other production variables - such as technique, use of sound and actual content - vary.

The mosaic format used by *Sesame Street* has been found to be very effective in maintaining the attention of children as young as two years of age   (Anderson & Levin, 1976; Anderson, Pugzles-Lorch, Erickson-Field & Sanders, 1981; Levin & Anderson, 1976; Pugzles-Lorch, Anderson & Levin, 1979). Since their attention is short-spanned, selective and affected by various attributes (including comprehensibility, the use of specific production variables, or the presence of favorite characters), a presentation style that provides a variety of segments may be particularly successful (Collins, 1981; Rice & Wartella, 1981).

The mosaic format may be especially effective for young viewers for other reasons as well. A review of literature on children's understanding of the concept of time itself (Munro & Wales, 1982) reveals that children might be very different from adults in their comprehension of sequence in film and television. Chronologically, they have been found to understand the concept of "during" prior to that of "while" - which implies a "cut" to another location. "Before" is understood prior to "after". This implies that "the child

first associates a spatial meaning with the temporal term
which is succeeded by a distinction between simultaneity and
sequence, and finally a distinction between the types of
sequence." (Munro & Wales, 1982, p. 175). Such findings may
have implications for an understanding of the developmental
processes governing the child viewer's comprehension of the
formal production attributes of television and film,
particularly those related to sequential construction of
meaning and editing rules (Zielinska, 1985).

The adult viewer selectively retains information and is
influenced by both qualities of the message and personal
characteristics of the viewer. The adult viewer is more apt
to consider the entire sequence from start to finish as a
complete message, to be input, compared with prior
experience/knowledge, and digested. The child on the other
hand, may in fact be viewing *each* individual segment as a
"hypothesis" to be tested *vis a vis* their prior knowledge,
and not the package in its entirety. Such a conceptualization
downplays the notion of plot, as well as "relevant" versus
"irrelevant" information, which imply comparison to an
evolving concept. In fact, studies by Collins (1970) and
Lessor (1972) illustrate this point in that children learn
both in an incidental manner (from peripheral, non-essential
or plot relevant material) as well as intentional manner
(from central material essential to the narrative or theme),
with "incidental learning increasing up to the age of 12 and

decreasing thereafter" (Collins, 1970, p. 1134).

Another reason for the choice of *Sesame Street* for this study was that its mosaic structure would allow for the presentation of many different models engaged in any particular targeted behavior. Although the use of multiple models, as a design variable in itself, has not been extensively studied in the literature (Bryan, 1975), there is evidence that perceived similarity to the model appears to facilitate imitative responses as well as performance (Rosenkrans, 1967). In providing many segments related to any given behavior, chances of finding a match between the model and each unique child viewer would be greatly enhanced. In addition to this, sometimes favorite characters gain added credibility (Baggaley, 1985; Meyer, 1973), and *Sesame Street* presents a large cast of popular muppets.

Since modelled prosocial behaviors often do not generalize well, from a theoretical point of view the kaleidoscopic multiple-model presentation afforded by *Sesame Street* seemed to offer the most advantages over other possible shows. *Mister Roger's Neighborhood*, another familiar children's television show, has also been used when assessing the effectiveness of using TV for social skills training (Coates, Pusser & Goodman, 1976; Friedrich & Stein, 1973; 1975a; 1975b). However, the pace and design of this show is radically different, with lengthy real-time sequences and few characters. This type of format would make the provision of

multiple models for children to identify with more unlikely, and the provision of multiple examples of any given prosocial behavior within one viewing more difficult to come by. The lengthy real-time format would also not allow for the construction of edited sequences focusing on specific prosocial behaviors, as easily as the mosaic format would.

A final reason for choosing Sesame Street was that from a review of the literature, it appears that its mosaic production design for social skills training has not been thoroughly tested. Although Sesame Street has been used extensively in studies aimed at affecting children's learning (Higgins & Sullivan, 1990; Lasker & Bernath, 1974; Lesser, 1972; Sproull, 1973), the targeted learning was primarily cognitive. A social goals program was initiated in the early years of the show's production (Felsenthal, 1974; McDonald & Paulson, 1971). Guidelines for writers were established from observations of children's free-play behavior, highlighting existing conflict resolution strategies and social skills exhibited (Paulson, Paulson, McDonald & Whittemore, 1970). However, evaluation of the program was limited (Felsenthal, 1974).

One study (Leifer, 1975), involved the viewing of three black and white test tapes by daycare children, twice over the course of two weeks. Results revealed differences (although not statistically significant) between the view and non-view groups in terms of specific transfer of cooperative

behaviors modelled. However, the behaviors modelled did not generalize to free-play, in that there were few differences between the test and control groups.

Another study by Paulson (1974) involved the daily viewing of a one hour show, as broadcast, by children as part of their daily daycare routine for the course of an entire season (50% of material shown included some aspect of social interaction). Within the season, nine specifically designed segments were planted and repeated six times, to gauge specific transfer of modelled behaviors. The segments were all black and white, and in this case used only pixilation (live-action "animated" by shooting frame by frame). Although the view groups did show more socially-valued cooperative behaviors than the non-view groups, the behaviors were directly related to what had been modelled in the black and white inserts. Once the context was changed, the cooperative behaviors decreased. Thus, the results did not generalize but were situation-specific.

The design of the treatments tested in this study respected the implicit production design guidelines of *Sesame Street* in their entirety. The mosaic format, with variation in production technique from segment to segment, was maintained throughout. However, the content was held constant - only socially-oriented segments were included. It was proposed that such a design might improve the chances of behaviors modelled being generalized to novel situations.

Enactive opportunity component. Since the primary aim of this study was to encourage prosocial behavior, effective means which would help the requisite behavior survive, persist, and be generalized, were sought. It was proposed that although providing models of prosocial behavior in a televised or videotaped form can affect subsequent behavior, perhaps a more potent effect can be achieved if in addition to viewing, an experiential memory of the behavior modelled can be created and encoded. This might be achieved by providing the opportunity for rehearsal and/or enactment of the behavior modelled. This would support the theory put forth by Hoffman, that "children become more sensitive to emotions by experiencing them themselves" (cited in Zelek-Caplan & Hay, 1989, p. 241). It is only when children can identify with the emotions of others, that we can expect them to react appropriately, or intervene prosocially. Perhaps by reducing the time between seeing the appropriate behavior and practising it, the chances of learning will be greatly increased. Furthermore, distributing practice over a variety of sessions may increase the likelihood of the desirable behavior being recalled.

The proposition that such experiential learning is effective, aside from its base in Cognitive-Developmental Theory, is also based on Game Theory and the use of simulations and role-playing techniques with adults. Such educational methods can be an immensely powerful tool for the

development of social and communication skills (Rockler, 1979; Van Ments, 1978). However, application of this theoretical approach has not been made with young children.

Related research. There were two studies which were related to the present design, in that they tested intervention approaches which relied on both the modelling and the enactive instructional strategies. Ahammer & Murray (1979) found that for facilitating altruism, a variety of role-playing techniques were more effective than prosocial video viewing alone. Friedrich and Stein (1975a) looked at differences between prosocial video-viewing alone, or in combination with two training methods - verbal-labelling and role-playing (or both combined). Although they did not make a viewing-versus-activity comparison, the combined viewing and training treatment was most effective.

Neither of these studies used *Sesame Street*, whose mosaic structure may be more effective for children than a temporally linear model (Zielinska, 1985) where themes are presented as part of a continuous plot. Instead, prosocial segments of regular TV programs were used (*Mister Roger's Neighborhood, Lassie, I Love Lucy, The Brady Bunch,* and *Father Knows Best*). Furthermore, neither study looked at the impact of the combined instructional strategy intervention approach factorially, which would make it possible to test the differential effect of various combinations of the two

instructional factors.

Practicability and Diffusibility

Respecting the systemic approach to social skills training innovation adopted for this study, the design of the solution for testing had to take into account not only benefit to the learner, but benefit to the learning system as well. For the purpose at hand, this was understood to be the practicability and diffusibility of the solution within the daycare system.

Having suggested that daycare programs should place more emphasis on the social development of children, one could attack this problem from many directions. One could work from a policy point of view, lobbying for government standards in daycare programs. Alternatively, one could approach the problem from a discrete design point of view, as in the design of particular books, games or materials for use within that learning environment. This could even encompass the design of curriculum for early childhood teacher training programs, whereby graduating teachers would be the instrument of change. However, all these approaches are somewhat partial, in that the question of acceptance within particular settings is not really taken into account. The systemic approach, just by virtue of its requisite awareness of the many simultaneous players in any learning system, does begin

to take acceptance and dissemination of possible intervention designs into consideration.

In order to make the proposed intervention program acceptable to the director and the teachers at typical daycare settings, existing constraints within the daycare system were taken into account in the very design of the intervention. The major constraints appeared to be: (a) the length of time which could realistically be made available for the intervention to run its course (the total time during which the intervention program and the researchers would be present at the daycare), and; (b) rigid daily schedules (accomodating necessities such as meals and naps).

Although long-term interventions (comprising environmental re-arrangement, continuous socially-oriented curricular activities for children, and on-going staff intervention) can be effective in enhancing the social skills and reducing the aggressive behavior of children attending daycare (Finkelstein, 1982), such comprehensive programs are not always possible. In fact, programs which do not require the total re-designing of existing curricular programs, if not just as useful, are more realistic as an intervention goal. Therefore, a short intervention program for testing was presented to the directors of daycare centers contacted for eventual participation in the study.

A final length of eight treatment days (not including weekends) was decided upon. In consultation with an expert

(an early childhood education professor) familiar with the daycare setting, this length would not be overly disruptive to existing curricular activities already in effect at typical daycare settings. The daily length of the program was 30 minutes. Again, this was delineated in consultation with an expert familiar with daycare. Anything longer would be ineffective in maintaining the attention of children of this age group. The program was implemented at the same time each day, although the time of day varied depending on what was most convenient at each setting.

In order to make the program acceptable to the teachers at the implementation sites, it was designed to be minimally disruptive to the day-to-day functioning of the host system. In a sense, ease of integration considerations were given equal emphasis to experimental design considerations which might have dictated more control over both the setting and the implementation. In keeping with this balanced approach, and even though this weakened the experimental design of the program evaluation, the actual caregivers at each setting implemented the program; the disruption caused by the introduction of a new temporary "substitute teacher" (as a researcher/implementor might be viewed) was avoided.

In a sense, while reducing the ecological threat to external validity of researcher presence and implementation, the threat to internal validity was increased. However, since success was defined not only in terms of benefit to the

learner, but acceptance by the principal players within the learning system, designing a program which would be implemented by the designer/researcher and not by the teachers themselves, was counterproductive. Furthermore, if the program were to benefit the learner in the long run, the effects would have to be potent enough to override implementation differences. The varying level of teacher training and compliance, particularly in following instructions during program implementation, had to be accepted. Once the initial training of the teachers was completed, they were their own - implementing the program without supervision.

Means of Evaluation of the Solution

The numerous studies reviewed revealed varying degrees of success in affecting young children' s prosocial behavior. However, often no effect was found. This may be due not so much to the design of the intervention, but to the way in which it was evaluated.

Towards assessing a child's natural prosocial tendencies, or determining if a program is effective in nourishing such tendencies, one might measure underlying abilities (empathic, perspective-taking, socio-cognitive), describe personality attributes (self-confidence, aggressiveness, warmth, popularity, sociability, etc.), or observe actual behavior (prosocial or antisocial). However, none of these, nor even the combination of all three are accurately predictive, or complete in their scope. For instance, even if perspective-taking ability is sufficiently evolved, personality attributes may impede prosocial behavior. Furthermore, naturalistic observations of behavior have revealed that although prosocial acts occur in most children, they occur rather infrequently (Radke-Yarrow & Zahn-Waxler, 1976). To further complicate matters, the intent of behaviors observed is often hard to judge. In light of all the above, it might be advisable to employ a combination of measures. However, results from several measures may often appear to be unrelated (Iannotti, 1985). Therefore, although methods of measurement must be chosen carefully, results

cannot be guaranteed.

Mussen and Eisenberg-Berg (1977) present an overview of assessment techniques typically used for assessing prosocial tendencies in children. There are four major categories: (a) situational tests, (b) rating scales, (c) sociometric questionnaires, and (d) naturalistic observations.

Situational tests are controlled settings which are designed to elicit prosocial responses. Many have looked at helping and donating behavior. It is normally assumed that the behavioral sample that is obtained is representative of a child's customary way of responding in a similar situation. Some have even been structured in order to assess natural behavior. Such structured naturalistic observations normally demand some sort of prompt being provided within the environment, possibly along with some rudimentary instructions being given (Paulson, 1972, 1974; Peterson, Ridley-Johnson & Carter, 1984).

Rating scales are questionnaires which assess a given child's standing on a continuum from high to low in a particular attribute. Such ratings are usually done by the teachers that know the child best, and sometimes by one or both parents. However, since a particular adult-child relationship is involved, when two ratings are done, the inter-rater reliability may not always be satisfactory.

Sociometric questionnaires usually involve peer nominations regarding particular attributes or behaviors.

However, such measures are more appropriate for assessing children in elementary school, than in preschool or daycare; preschool children may be too young to effectively evaluate the typical responses or characteristics of their peers.

Naturalistic observations involve observing children, often during free-play. There is no manipulation or control of the situation, although classes of targeted behaviors to be observed are normally defined beforehand. As with rating scales, inter-observer reliability may not always be satisfactory since intent of acts may be judged differently, as well as the fact that two observers from two vantage points, may not actually have the opportunity to observe the same acts. For reasons of practicality, observations are usually done on a time-sampling basis. Although there is evidence that such methods are reliable when compared with continuous observation data (Klesges, Woolfrey, & Vollmer, 1985), with prosocial behaviors, which are so rare, there is a reasonable chance that some will be missed.

The literature review lends support to the assertion that a combination of measures might be advisable in that there are no generally accepted, standardized methods of assessing prosocial behavior. For the purposes of this study, a combination of four quantitative means of measurement was adopted: (a) direct observations, (b) caregiver ratings, (c) perspective-taking ability testing, and (d) altruistic behavior testing. In addition to this, two qualitative means

of measurement were adopted in order to get a better picture of particular setting and/or implementation differences which might confound treatment effects: (a) daily comments regarding the program from caregivers, and (b) field setting descriptions by the research team.

Research Hypotheses

This study focused primarily on the effect of the program on prosocial behavior during free-play. However, since the length of the intervention program was relatively short (eight treatment days), simply testing for a direct increase in prosocial behavior was too limited in scope. A look at the relationship between prosocial behavior and other aspects of social behavior and/or abilities was of interest for future research. With this in mind, pretest and posttest measures of four social behaviors and/or related abilities were used: prosocial behavior, antisocial behavior, perspective-taking ability, and altruistic donating behavior.

It was hypothesized that if an increase in prosocial behavior were found during posttesting, it would be in the conditions which provided prosocial training, using combined instructional strategies, or only one instructional strategy at a time. Such an increase was not expected in the condition with no prosocial training component. It was expected that the combined instructional strategy condition would be more

effective than either of the one instructional strategy conditions. It was not hypothesized which of the two one instructional strategy conditions would be more effective than the other, although such differences were of interest for future research and subsequent design of instructional strategies for social skills training for this age group.

Since the study was aimed at increasing prosocial behavior, hypotheses related to treatment effects on antisocial behavior were not the focus. Furthermore, since the study would be conducted at good quality daycares in middle-class neighborhoods, high initial antisocial behavior among children was not expected. However, if posttest differences were found, it was expected that the children in the conditions which received some form of prosocial training would exhibit less antisocial behavior than those children in the condition that did not.

Generally, those children who had better perspective-taking abilities prior to treatment, were expected to exhibit higher levels of prosocial behavior in pretest free-play observations, than those with lower perspective-taking abilities. Furthermore, all children were expected to rate highest on the perceptual perspective-taking tasks, followed by the cognitive perspective-taking, and lowest on affective perspective-taking. Since the treatment was only eight days, the potency of effect in terms of an increase in perspective-taking ability may be questioned. Nevertheless, theoretically

the program was designed to encourage such an effect, in that inducing cognitive and affective perspective-taking was stressed during post-viewing and post-activity discussions. Furthermore, the activities allowed for actual role-taking practice. If an effect were found, it was predicted that the cooperative activity-type conditions would fare better than the individualistic activity-type conditions.

The literature shows that altruistic (donating) behavior is rare among this age group (Lipscomb et al., 1982). If an increase was found, it was predicted that it would be in the conditions which received some form of prosocial training.

Sex was tested as a factor in the design. Friedrich and Stein (1975a) found that in combination with modelling of prosocial behavior on video, role-playing was more effective for training boys to exhibit helping behavior, while verbal-labelling was more effective for girls - the former method was active, while the latter was passive, involving sitting, listening and talking. Since the instructional stategies tested in this study included one which was active and enagaging (activities), and one which was passive (video-viewing), a similar effect was possible. It was hypothesized that if an interaction between sex and instructional strategy were found, the enactive training would be more effective for training boys to act prosocially, while the observational training would be more effective for girls.

METHOD

Subjects

Fourteen Montreal daycares deemed to be matched in terms of their socioeconomic profile of neighborhood and language use (English) were contacted by letter. Nine responded favorably towards being part of the study. One of these was designated a pilot testing site where the program and research design were evaluated, the remaining eight were field testing sites.

In total, 150 children were part of the study, 68 boys and 82 girls. The children were between the ages of 36 and 76 months, the mean age for the entire sample being 54 months.

Although no formal measure of ethnic, racial or cultural diversity was taken, a qualitative description of the profiles of the participating classes at each center revealed that the groups were visibly multi-cultural, normally without any one majority racial or ethnic sector.

Research Design

The daycare setting has certain limitations which could not be ignored when choosing the optimum research design. Since the aim was to study the interplay of two instructional factors (video-type and activity-type), four treatment

conditions were required. The norm in daycares in the Montreal region is to divide children by age into classes of between 16 and 20. Therefore, if children had been randomly assigned to the four conditions within each daycare setting, the cell sizes would have been very small. This would have been a serious problem since the program being evaluated encompasses group activities, and since there is high absenteeism, groups activities might not have been consistently possible. Furthermore, the norm is to have two caregivers per class. Short of total disruption of the regular schedules, which would not have been agreed to, simultaneous supervision of four small groups would have been impossible. Since the aim was to integrate the program within the regular daycare schedule as unobtrusively as possible, any major schedule changes, or novel division into groups would have been counterproductive.

Although it would have been good to pretest subjects in numerous daycares, and then assign daycares to treatment conditions, this was not possible either. However, since the settings were matched as much as possible according to demographic characteristics, it was hoped that developmental age-related differences would in fact override subtle setting effects (different caregivers, different existing programs, etc.). For all of the reasons outlined, only a quasi-experimental research design was feasible. The research design adopted was a nonequivalent, pretest-posttest

factorial design (Campbell & Stanley, 1963).

The eight test settings were randomly assigned to conditions. The whole set of four treatment conditions was run twice, thus assigning two settings per condition. Usually only one intact class within each setting was part of the study. At two daycares, the children within the targeted age group were subdivided into two classes; in this case, two classes participated.

The two instructional factors being studied in the design were:

1.   Video-type (prosocial or cognitive) and;
2.   Activity-type (cooperative or individualistic).

In the context of this study, cognitive video-type was considered a neutral level of the factor since it did not provide prosocial training. The individualistic activity-type was also considered neutral since it did not provide the opportunity to rehearse prosocial behavior. The four treatment conditions comprised different combinations of the ON (with prosocial training) and OFF (without prosocial training) levels of the two factors. The analysis included sex as a third factor, for a 2 X 2 x 2 factorial design, as presented in Figure 8.

Figure 8. *Research design.*
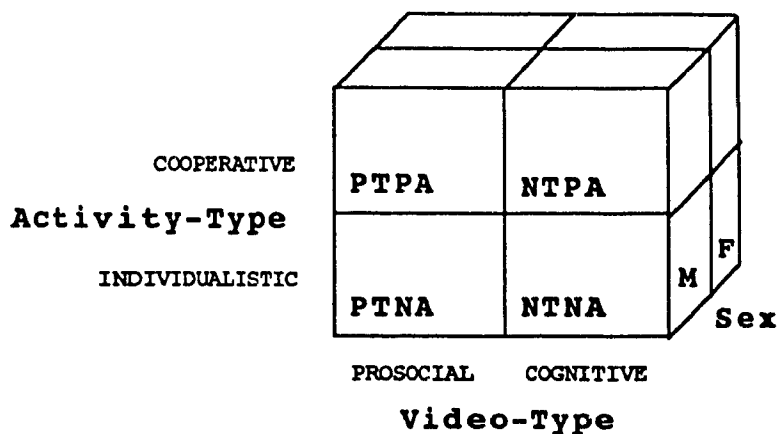
Video-Type

Note: The conditions were as follows:

PTPA = Prosocial video-type, Prosocial activity-type;

PTNA = Prosocial video-type, Neutral activity-type;

NTPA = Neutral video-type, Prosocial activity-type;

NTNA = Neutral video-type, Neutral activity-type.

Table 1 presents the demographic profile of the sample per condition:

Table 1

Demographic Profile of Sample per Condition

Condition	PTPA	PTNA	NTPA	NTNA
Total N	52	33	32	33
Males	25	13	13	17
Females	27	20	19	16
Mean Age in months	54	57	50	56

Treatment

Video Viewing

The treatment consisted of eight days of viewing *Sesame Street*, followed by group activities. Two VHS videotapes were assembled from a collection of segments: a prosocial-theme tape and a cognitive-theme tape. The prosocial segments were obtained from the Children's Television Workshop in New York, with rights being obtained to use them as part of the present research program, within the course of one year. The cognitive segments were obtained by taping directly from television broadcasts. Detailed editing guidelines for both tapes were established and adhered to strictly. The entire viewing program was assembled on one VHS videotape. Each day was clearly labelled with a title (Day 1, Day 2 etc.) followed by several seconds of black. At the end of the allotted viewing for that day, 10 seconds of black were included during which the caregiver would simply switch the tape off and already have the tape cued for the next day of viewing.

Prosocial Video-Type

The videotape was assembled using 28 segments of *Sesame Street* which were chosen for this research from an assortment of appropriate socially-oriented segments offered for viewing by the research department of the Children's Television Workshop. One segment was edited into two parts, thus rendering a total of 29 segments. Certain guidelines were adhered to in the selection of test segments. For instance, segments where the prosocial behavior is directed towards adults were not used. Unsuccessful attempts at prosocial behaviors were presented, but sparingly. Since the aim was to test a style of presentation of modelled behaviors rather than to promote an existing show, no openings and/or closings with the *Sesame Street* theme were requested.

The segments addressed four prosocial behaviors: helping; sharing, turn-taking, and cooperation. Several addressed a combination of behaviors. The provision of numerous examples of the four targeted prosocial behaviors was stressed in order to strengthen the possibility of generalization of modelled prosocial behaviors by viewers. There was a broad range of approaches to modelling the prosocial behaviors - some segments were highly abstract, as for instance animated petals joining to form a flower, while others were highly realistic, as the documentary segment where an entire neighborhood pitched in to help remodel an

existing playground. Essentially, it was found that among the segments to be used: (a) 21 segments addressing *Cooperation* - 12 with verbal labeling, 9 without; (b) 18 segments addressing *Helping* - 6 with verbal labeling, 12 without; (c) 9 segments addressing *Turn-taking* - 5 with verbal labeling, 4 without; and (d) 8 segments addressing *Sharing* - 2 with verbal labeling, 6 without.

The topical theme at the Children's Television Workshop at the time the segments were obtained was that of "entering social groups", with the underlying theme of multiculturalism. Nevertheless, segments in which cooperation and helping were discussed and modelled were not hard to find since these themes had been stressed in earlier seasons. However, segments focusing on sharing and turn-taking were surprisingly difficult to obtain. This was unfortunate since these behaviors are basic survival necessities for children when interacting or playing together in groups, be it in a public park or in a daycare setting.

A detailed content analysis of the segments selected was undertaken. First of all, the prosocial theme was noted, as well as which segments verbally labelled the behaviors in question, and which did not. Next, the following were coded: precise length; production technique (animated, live, pixilated, muppet, or any combination of these); and other salient characteristics such as the type of music, colorfulness, pace, or other outstanding characteristics.

The goal was to provide between 10 and 12 minutes of viewing per day, for eight days. Since a minimum of 80 minutes of program was required, and the total screen time of the combined segments was approximately 58 minutes, some had to be repeated. Certain guidelines for repetitions were established. There would be no more than two viewings per segment. A segment could not be repeated the very next treatment day. If more than one segment from the day of initial viewing was to be repeated on another day, the order of presentation was to be re-arranged. This occurred five times: three times with five days in between, and two times with six days in between. The final edited prosocial viewing tape had 16 repeated segments out of the total of 29, as shown in Table 2.

Table 2

Repeated Video Segments

Occurrence	Time between repetitions
2	2 days in between
1	3 days in between
1	4 days in between
6	5 days in between
5	6 days in between
1	7 days in between

16 repeated segments

While respecting the lengths of segments available, as well as satisfying the established time requirement (10-12 minutes), the number of segments included per viewing day was typically between five and six. The time range between the length of viewing per treatment day was 1 minute and 17 seconds; the maximum viewing length was 11 minutes and 34 seconds, and the minimum length was 10 minutes and 17 seconds.

In order to conform with the mosaic-type sequencing of the broadcast show, production technique, length, and other salient characteristics (i.e., presence of music) were varied from segment to segment as much as possible. In light of what was available, this was not difficult to accomplish.

Since there was a disproportionate number of segments dealing with the four targeted behaviors, it was impossible to design a program where a full day of viewing would emphasize one particular behavior. Instead, a combination of behaviors was targeted each day. A behavior was seen to be emphasized if at least three out of the five or six segments viewed on any particular day dealt with it. Figure 9 provides a composite overview of the eight days of prosocial viewing, indicating which of the targeted prosocial behaviors was emphasized each day. Appendix A presents the detailed content analysis of prosocial viewing for each of the eight treatment days.

Figure 9. *Overview of prosocial viewing by theme.*

	TOTAL NUMBER OF SEGMENTS	SECOND VIEWING	TYPE OF MODELLING — without verbal-labelling / with and without verbal-labeling — Number of segments that emphasized the 4 targetted prosocial behaviors each day; If 3 or more segments emphasized a behavior, it was viewed as one of the themes for that day.				DAILY THEMES			
			HELPING	SHARING	TURN-TAKING	COOPERATION	HELPING	SHARING	TURN-TAKING	COOPERATION
DAY 1	6	0	6	1	2	3	▨			▨
DAY 2	6	0	2	2	0	6				▨
DAY 3	6	0	4	1	3	5	▨			▨
DAY 4	5	1	1	4	2	4		▨		▨
DAY 5	6	3	5	0	1	5	▨			▨
DAY 6	5	4	4	0	0	3	▨			▨
DAY 7	5	4	1	3	3	4		▨	▨	▨
DAY 8	6	4	2	3	3	5		▨	▨	▨

NUMBER OF DAYS OF EMPHASIS:

	HELPING	SHARING	TURN-TAKING	COOPERATION
HELPING	4			
SHARING		3		
TURN-TAKING			3	
COOPERATION				8

Cognitive Video-Type

The neutral viewing videotape consisted of segments from
Sesame Street that presented cognitive content, such as
letter or number identification, show-and-tell about the
environment and its inhabitants, word acquisition, word plays
(rhymes, spelling etc.) and understanding of concepts (i.e.,
opposites). Four complete shows were taped. They were aired
in Montreal, on PBS (Public Broadcasting System, from the
USA) and CBC (Canadian Broadcasting Corporation) on July 12,
(two shows), July 18, and July 19, 1990.

The same sequencing guidelines were adhered to as for
the assembly of the prosocial videotape. Initially, all
segments deemed prosocial, or where modeling effects on
social behavior were predicted, were deleted. This left only
segments which dealt with cognitive material (numbers,
letters, French language, etc.) or which were documentary (a
trip to a factory, nature, etc.). The sequence that emerged
was analyzed to see if the mosaic-type format was retained.
If not enough variation remained between adjoining segements
after prosocial segments were removed, the sequence was re-
edited so that production technique, length, and other
salient characteristics were sufficently variable.

There are repetitions in the cognitive viewing condition
as well. Out of a total of 67 segments used, 10 were
repeated. The time range between length of viewing per
treatment day was 56 seconds. The maximum viewing time per

day was 10 minutes and 36 seconds, and the minimum viewing time was 9 minutes and 40 seconds. Appendix B presents a list of segments seen per viewing day in the neutral conditions.

The overt differences between the prosocial and neutral viewing conditions, aside from content, were number of segments seen per day, and predominant production technique. Due to the fact that, in general, the cognitive segments were much shorter than the prosocial ones, the neutral tape presented more segments per sitting than the prosocial tape: the prosocial condition included 5 or 6 segments per day; the neutral condition included between 7 and 12 segments per day. Furthermore, since the production technique of the majority of cognitive segments was animation, while the prosocial segments employed a broad range of production techniques, there was less variety of production technique in the neutral condition.

Activities

Following viewing of the *Sesame Street* segments, children were to engage in various games and activities for approximately 10 to 15 minutes. Caregivers were given instruction sheets which clearly outlined in a step by step manner how they were required to guide the children through these activities. To further facilitate implementation of the program, the instruction sheets were printed on colored card

which directly matched the title for the viewing segment for that day. The procedure was described in detail to each caregiver personally.

Immediately following viewing, children were led in a brief discussion in which certain elements that they had seen were highlighted and labelled verbally. Since each condition involved a different combination of viewing with activity, the discussion immediately following viewing was tailored to precisely match what had been seen. In the case of prosocial viewing, the prosocial behaviors seen were discussed. In the case of cognitive viewing, elements not related to social behavior were highlighted. An affective identification with the characters and situations observed was usually encouraged. Then the children engaged in games and activities. Two sets of activities were designed: One set was cooperative, the other individualistic. The two sets of activities were as similar as possible except that those in the cooperative condition were performed in a group and encouraged peer interaction, while those in the individualistic condition were performed by each child individually. For instance, if the task was painting a rainbow, children in the cooperative condition painted one group picture, while children in the individualistic condition each painted their own picture.

Cooperative Activity-Type

The cooperative activities were designed to both reinforce the prosocial themes presented in the viewing sequence for each treatment day, and to provide the opportunity for rehearsing and/or enacting the requisite behaviors. They were designed to either relate directly to a particular segment seen, or relate to the theme for that day.

During the discussion immediately following viewing, prosocial behaviors were verbally labelled and discussed. In the case where prosocial viewing immediately preceded the discussion, a direct link was made to particular segments. However, if cognitive viewing preceded the cooperative activities, initially a cognitive link was made to a particular segment, and then its social aspect was highlighted. For instance, on DAY 4 in the NTPA condition, there was a documentary nature segment which showed the change of seasons. In the discussion that followed, rather than emphasizing a descriptive understanding of the different seasons (as would be the case for when this segment preceded individualistic activities), the concept of growth was highlighted and the link was made to how several natural forces have to "work together", or "cooperate", to make things grow. The actual activity then flowed logically from what was discussed.

The interactive quality of the activity was stressed. Children were required to work together either in pairs, small groups of three or four, or as a whole class. Where possible, children were given the chance to experience the range of roles implicit within a given situation. For instance, in a turn-taking situation, the difference between the feelings involved in having a turn while everyone else has to wait, and having to wait while everyone else gets a turn, was explored. In this way, the children had first-hand experience of both perspectives, with their associated affective and cognitive domain. On five of the eight treatment days, the activities ended with a brief verbal summing up. On two occasions the benefits of the prosocial behavior that they had engaged in were stressed, and on three occasions the children were encouraged to share their feelings about what they had experienced together.

Each of the four targeted prosocial themes was highlighted on two out of the eight days of treatment. The activities were designed to take advantage of a variety of types of enactive training techniques which have been found to be effective for social development. There were opportunities for guided story enactment and role-play. Such activities conformed with research indicating that fantasy-play can be an effective means of encouraging positive sociability (Connolly & Doyle, 1984; Connolly, Doyle & Reznick, 1988; Fein, 1981). There were cooperative games

designed in accordance with literature indicating that cooperative play can benefit social skills (Foster, 1984; Orlick, 1978; 1981a; 1981b; 1983). There were also group activities, in accordance with research literature on the beneficial effects of cooperative learning and social problem-solving (Adcock & Segal, 1983, Bridgeman, 1981; Cartwright, 1987; Cooper, 1980; Goffin, 1987; Hockaday, 1984; Krasner & Rubin, 1983).

Individualistic Activity-Type

For the individualistic conditions, the activities were designed to highlight cognitive aspects of what was seen on video, rather than socio-behavioral aspects. For instance, children had the opportunity to practise the alphabet, counting, singing familiar and new songs. As much as possible the activities in the two conditions were matched, the major difference being that in the individualistic conditions individual performance and enjoyment was emphasized rather than cooperative group outcome.

Appendix C presents a complete set of instruction sheets which were handed over to the principal caregiver along with the appropriate VHS videotape for all four treatment conditions.

Measures

<u>Observations</u>

<u>Structure</u>

Naturalistic observations of prosocial behavior are difficult to document in that as previously stated, these behaviors are relatively rare. There was a question, in this regard, whether observations during free-play would result in enough data. The provision of some structure to the observation period was considered, in that children might then be given added opportunities to exhibit these behaviors. Normally, this might involve the provision of prompts, games, or situations which might evoke prosocial behavior. In a study by Paulson (1974), the structured observational measures which followed viewing of prosocial *Sesame Street* segments ranged from those which provided prompts which specifically related to segments seen, to those which were analogous (i.e., similar activity to be evoked, but using different objects). It was found that, although children did increase their imitation of what they had seen when given similar prompts, the further removed the prompt was from exactly what had been seen, the less the behaviors generalized. Since the aim of the present study was to encourage a wide range of prosocial behavior, overly specific

structure was avoided. Two approaches were pilot tested.

One approach involved the provision of novel materials (large cardboard boxes and rope) within a familiar environment and required that only four children could play with the new materials at a time. It was hoped that the children would exhibit a range of social behaviors as they explored the new objects. The use of large cardboard boxes had previously been used in a preschool setting with some success towards providing an opportunity for cooperation (by Dr. Chambers as part of the Early Childhood Education Program at Concordia University).

When pilot tested, this approach proved to be awkward and ineffective. Since small groups were assigned a turn to play with the novel materials for a limited time, rather than simply leaving the materials there for spontaneous use, children were too aware of the observers and acted as if they thought they were *expected* to do something with the boxes. This led to explorations of the materials that proved potentially dangerous to the children (i.e., trying to stand on the edge, whereby the box collapsed). Apparently, each new group of four children was trying to outdo the former in finding new ways of using the materials. Furthermore, simultaneous observation of more than one child proved overly difficult. As a result, this measure was dropped.

The second structured activity which was pilot tested involved the wearing of a "supersuit" by each child for a

predetermined amount of time. The supersuit was an outfit which was difficult to button at the back, requiring help from another child. Peterson, Ridley-Johnson and Carter (1984) reported its use as a means for eliciting altruistic behavior. However, when pilot tested the entire activity caused too much commotion in the classroom, on top of which the supersuit did not fit all children (in wide age groups). Furthermore, since the scenario involved observation of both the child wearing the suit (recipient) and other children interacting with that child (donors), it was difficult to keep track of exactly who was interacting with the wearer. This was a problem since it was primarily the donor's behavior which was of interest, not the recipient's.

As a result of pilot testing, the structured observation route was rejected in favor of simple free-play observations. The observation scheme emerged as one where children were observed in a randomly assigned order, for a specified time period, and a set of predetermined social behaviors that were displayed were noted (Bakeman & Gottman, 1986).

Length of Observation

A review of the literature indicated that the length of observations varies greatly. Since the length of the treatment was only eight days, and since effects may deteriorate after a few days, three days of observation were

decided upon. The actual minutes of observations per child, per day, were constrained by the daycare environment (amount of free-play opportunities divided by the actual number of children to be observed). Two minutes per child, per observation day was a conceivable choice. A two-minute interval has previously been used and found to be reliable (Eisenberg-Berg & Lennon, 1980). Such an observational time resulted in a total of six minutes of data per child prior to treatment, and six minutes after treatment.

Operational Definitions

Only peer related interactions were to be noted, since adult-child behaviors were not the focus of the intervention program. A previously used coding scheme (Chambers, 1990) was used as a base. However, since it included only prosocial behaviors, antisocial categories were created. This was done by viewing videotapes of children playing in the observation nursery in the Department of Education at Concordia University, and taking note of common and frequently occurring antisocial behaviors. Of the eight prosocial behaviors that were part of the observational scheme, Bergin and Bergin (1988) - in a study where 40 "caregivers were asked for their observations of children's prosocial behavior in natural settings based on their daily experience with the children" (p. 4) - found that five were frequently occurring

and common.

Detailed operational definitions for the behaviors to be coded were finalized from a review of the literature, and discussion by two observers during analysis of videotapes and observations of free-play behavior during pilot-testing. Furthermore, definitions of the four prosocial categories which were to be modelled in the *Sesame Street* segments were further analyzed to determine if they were in harmony with the meaning of these behaviors implied by the producers of the segments. The final list of operationally defined behaviors which were coded was as follows:

Prosocial Behaviors:

Positive Interaction: The child engages in a positive social interaction with another for a considerable amount of time (for instance, a conversation, or parallel play where there is an awareness of another and their activity). This definition emerged from direct observations, and from past research (Chambers, 1990). This category also included what could be viewed as pre-cooperative behavior (Paulson, 1974), but where a joint outcome or goal did not emerge. It also includes attempts at cooperation which were initiated by the child.

Cooperation: The child work/plays together with another for a common discernable goal. This would normally involve combining skills and resources that are necessary to achieve a goal which would not be attainable as efficiently or enjoyably alone (Paulson, 1974).

Helping: The child attempts to alleviate another's non-emotional needs (i.e., helps another with a task or offers an object not previously in the giver's possession, for instance a puzzle piece)(Eisenberg-Berg & Lennon, 1980).

Giving: The child gives away a material object which was previously in the child's possession. This is done of the child's own initiative and not at the request of another (Chambers, 1990).

Sharing: The child gives away or allows another child temporary use of a material object(s) previously in the child's possession but not part of a game (i.e., sharing of tea cups when playing tea would not be coded as sharing) (Eisenberg-Berg & Lennon, 1980). Within the scope of this study, sharing was coded if the object(s) being shared were available in quantity. Giving applied when there was only one such object currently available.

Turn-taking: The child uses a goal-object or performs a goal-activity alternatively with other(s) (Paulson, 1974). It might also involve trading where the child may agree to exchange or barter with another for an equally attractive goal (activity or object), thus allowing the other temporary

use of their object while taking a turn using another's object.

Comforting: The child attempts to alleviate the emotional needs of another (i.e., tries to make another feel better when in distress) (Eisenberg-Berg & Lennon; 1980).

Affection: The child overtly expresses affection for another (a hug, a kiss, an arm around the shoulder, etc.) (Chambers, 1990).

Antisocial Behaviors:

Grabbing: The child takes or attempts to take what is in the possession of another without their approval or compliance.

Verbal Aggression: The child verbally accosts another with the intention of inflicting emotional pain or inciting ridicule (i.e., an insult, criticism, or overt disapproval about some characteristic or activity exhibited by the other). This category would not include self-protective behavior however, which might appear aggressive, but was more territorial and defensive than offensive and intentionally hurtful.

Physical Aggression: The child physically accosts another with the intention to inflict physical pain or discomfort. Once again, this category would not include self-protective behavior in response to the aggression of another.

Excluding: The child clearly indicates that they do not want to include another in their current activity. This would not apply in the case where a teacher had stated that only three children could play at a certain area and a fourth person appeared. It could include hoarding behavior, where a child would amass all of a certain type of object made available to the whole group, thereby excluding everyone from using them.

Consistent with a previous study which employed a coding scheme similar to this (Chambers, 1990), a behavior had to meet the following criteria to be coded as prosocial or antisocial: (a) be demonstrated by the focal child, (b) be clear to the observer whether the intent of the child was prosocial or antisocial, (c) be unprompted by the teacher or other adult, and (d) be unrelated to a teacher-directed activity. The final coding sheet used for the free-play observations (pre and post) appears in Appendix D.

Coding

The observational data were coded by counting the number of incidences of each of the categorized behaviors per observation period. If no occurrences were recorded, the behavior was assigned a score of "0" for that observation session. Although not included in the coding scheme, four new categories were created during observations which were not

foreseen but necessary, these being: (a) prosocial-other, (b) prosocial-combination, (c) antisocial-other, and (d) antisocial-combination. These included cases which were unique (as in "protection of another" which was prosocial but did not fit in any of the pre-established categories) or which clearly involved more than one of the available categories simultaneously (as in a combination of verbal and physical aggression).

Subjects who were absent for all three days of pretest or posttest observations were eliminated from the sample. For those that remained but were absent for one or two days, mean substitutions were used. The mean for the entire sample for that day was used.

Instances of the 10 types of coded prosocial behaviors (including the created prosocial-other and prosocial-combination categories) were added for a total pretest prosocial behavior score, as well as a total posttest prosocial behavior score.

Instances of the six types of coded Antisocial behavior (including the created antisocial-other and antisocial-combination categories) were added for a total pretest antisocial behavior score, as well as a total posttest antisocial behavior score.

Caregiver Ratings

For the purpose of assessing the children's social tendencies, a teacher/caregiver rating scale of social behavior, as well as related personality attributes, was sought. A review of the literature revealed the use of various measures designed for this purpose. However, many studies used instruments designed to detect deviant levels of social behavior that would miss more subtle dimensions of normal behavior. Some were very broad in scope, such as the Q-Sort methodologies (Block & Block, 1980; Waters, Noyes, Vaughn & Ricks, 1985), and therefore highly descriptive. Such methods have been used successfully in compiling a comprehensive empathy score (Kestenbaum, Farber & Sroufe, 1989), as well as a more general ego-control and ego-resiliency score (Block & Block, 1979), which is said to be predictive of a variety of social behaviors. However, the Q-Sort methodology is cumbersome in that it requires at least 30 minutes of assessment time per child.

The *Preschool Behavior Questionnaire* (PBQ) (Behar, 1977; Behar & Stringfield, 1974) was reported extensively in the literature. This scale was based on an earlier measure (*Rutter's Children's Behavior Questionnaire*) that was developed for older children, and was also extensively referred to. The PBQ has been found to possess criterion validity and high inter-rater and test-retest reliabilities.

Essentially it assesses three factors labelled hostile-aggressive, anxious-fearful, and hyperactive-distractible, which are said to be predictive of aspects of social competence in young children. Aside from extensive use of this scale in its complete form, it has also been used successfully as a base for new, more specific measures (Denham, 1987; Funderburk & Eyberg, 1989; Hinde, Easton & Meller, 1984; Roper & Hinde, 1979; Rubin & Clark, 1983; Rubin, Daniels-Beirness & Hayvren, 1982; Tremblay, Desmarais-Gervais, Gagnon & Charlebois, 1987).

Tremblay et al. (1987) tested a hypothesis, based on earlier research, that the PBQ might be reduced into a two factor scale (aggressive-hyperactive-distractible, and anxious-fearful) and found that such a structure was equally efficient as well as simpler to use. Furthermore, it was stable across sexes, ages, socioeconomic populations and cultures. Tremblay et al. (1987) further adapted the PBQ by integrating elements of a *Prosocial Behavior Questionnaire* (Weir & Duveen, 1981). This rendered the scale more comprehensive in assessing the full spectrum of social behavior, in that not only negative aspects would be rated and measured.

The hybrid scale, renamed the *Preschool Social Behavior Questionnaire* (PSBQ) has been particularly useful in helping to predict the future adjustment of high risk children (Loeber, Tremblay, Gagnon & Charlebois, 1989; Tremblay,

Vitaro, Gagnon, Piché & Royer, 1989). Essentially it takes into account disruptive, anxious and prosocial tendencies. This scale was the optimum choice for the purpose at hand. In order to include some other related attributes, such as popularity with peers, likability by adults, conflict resolution style, etc, some questions from the *California Child Q-Sort* (Block & Block, 1980) were integrated.

Results from the caregiver ratings of children using the *Preschool Social Behavior Questionnaire* have been found to correlate significantly with ratings of behavior by mothers, as well as peers. However, the relationship between teacher ratings using this measure and free-play observational data were not available. Results from the *Preschool Behavior Questionnaire* (Behar, 1977; Behar & Stringfield, 1974), have also been found to correlate well with results from other assessment techniques, such as sociometric, social-cognitive, as well as observational data (Denham, 1987; Rubin & Clark, 1983; Rubin, Daniels-Beirness & Hayvren, 1982).

Sociometric questionnaires were avoided due to the young age of the subjects. Denham (1987) found that "there were more borderline and significant correlations between teacher ratings and observation analyses than would be expected by chance" (p. 1). It was hoped that the naturalistic observations of free-play behavior undertaken as part of this study would indeed reflect the useful relationship with teacher ratings that has been found in the literature (Factor

& Frankie, 1985; Factor & Schilmoeller, 1984).

The children's principal caregivers were asked to rate the children's social behavior and competence prior to implementation of the treatment, as well as after (t o weeks later). Caregivers were asked to rate children using a three point scale, indicating that as far as they are aware, the statement in question "Certainly applies", "Applies Sometimes", or "Doesn't Apply". The pretest questionnaire consisted of 61 questions: 21 addressed prosocial behaviors, 16 addressed anxious/disruptive personality factors, 13 addressed anxious/disruptive behaviors (which might also be termed antisocial behavior), 7 addressed cognitive abilities, and 4 were directed at miscellaneous characteristics such as tendency to mimic, popularity among peers, and likability among adults. The cognitive questions were implanted more as a distractor variable than as a means of rating the children's intellectual development.

A shortened version of the pretest was administered as a posttest. This measure consisted of 41 questions. Essentially, the 16 anxious personality and 4 miscellaneous questions were dropped since these were viewed as more permanent characteristics which might not change over the course of 2 weeks. The instructions for the posttest were modified, in that teachers were asked to keep the past two weeks in mind when rating the children.

It was hoped initially that two caregivers would rate

each child in order to get teacher reliability data. However, due to the length of the questionnaire, it was difficult to accomplish this. Instead, the two principal caregivers per participating class randomly divided the class and each rated half the children. They rated the same group of children during posttesting. What teacher reliability data was collected was coded. Children who were new to the daycare were not rated, since their caregivers were not sufficiently familiar with their character or behavior.

Coding

The questionnaires were scored by coding answers of "Certainly applies" with a 2, answers of "Applies Sometimes" with a 1, and answers of "Doesn't Apply" with a 0. The scores on the 21 prosocial questions were summed for a total pretest and a total posttest prosocial (P) score. The scores on the 13 anxious-disruptive behavior questions were summed for a total pretest and a total posttest anxious-behavior (AB) score. The scores on the 16 anxious-personality questions (pretest only) were summed for a total anxious-personality (AP) score. The 7 questions which dealt with cognitive skills were not used since they were inserted as distractor variables. The 4 miscellaneous questions were not used because there was uneven distribution across the three levels of coding, thereby not allowing comparisons between

high and low groups across the characteristics measured.

A complete pretest and posttest questionnaire appears in Appendix E along with a list of questions by category and their source.

Perspective-Taking Ability Test

Perspective-taking ability was assessed on an individual basis, both prior to the treatment and after. This was done primarily to test for an underlying relationship between perspective-taking ability and prosocial behavior. Although assessments of empathy have been reported in the literature, results are often inconclusive for this age group (Eisenberg-Berg & Lennon, 1980; Eisenberg & Miller, 1987). In fact, they may measure social desirability instead of empathy. Although perspective-taking ability and its relationship to naturally occurring prosocial behaviors or situational tests is not always proven either (Iannotti, 1985), sometimes modest correlations are found (Strayer, 1980), and on occasion a definite relationship can be discerned (Buckley, Siegel & Ness, 1979).

The perspective-taking task that was used in this study was developed by Abrahams (1979) and was adapted successfully by Chambers (1990). This instrument involves showing a three-dimensional scene and asking subjects to explain what different characters within the scene are doing, seeing,

thinking, and feeling. Therefore, perceptual, cognitive, and affective role-taking are measured. Three-dimensional stimuli has been found to be more effective with young children than two-dimensional stimuli (Getz, Goldman & Corsini, 1984). The test was adapted to take into account the existing affective state of the child prior to being tested, because of the possible influence their interpretation of the scene presented. Also, since "young children who focus on their own emotional reactions to the experiences of others gain better understanding of others' emotions than if they focus on how others might feel"(Bandura, 1986, p. 314), this inductive method was incorporated into the routine line of questioning as well.

The original version of the perspective-taking test, the *Boy and Bear Test* (Abrahams, 1979), involved providing a scene where there was the potential for an imagined fearful response on the part of the characters involved. A second version was developed, the *Birthday Party Test*, to allow for a different emotional response, namely surprise and/or happiness. The two versions were counterbalanced to avoid test-retest effects. Results were coded on the same sheet since although the props were different, the line of questioning was constant. Figures 10 and 11 show the plan of the three-dimensional model which was presented to each child individually for both perspective-taking tests.

Figure 10 . *Plan of the 3-D Prop for the Boy and Bear Test.*

Perspective 2
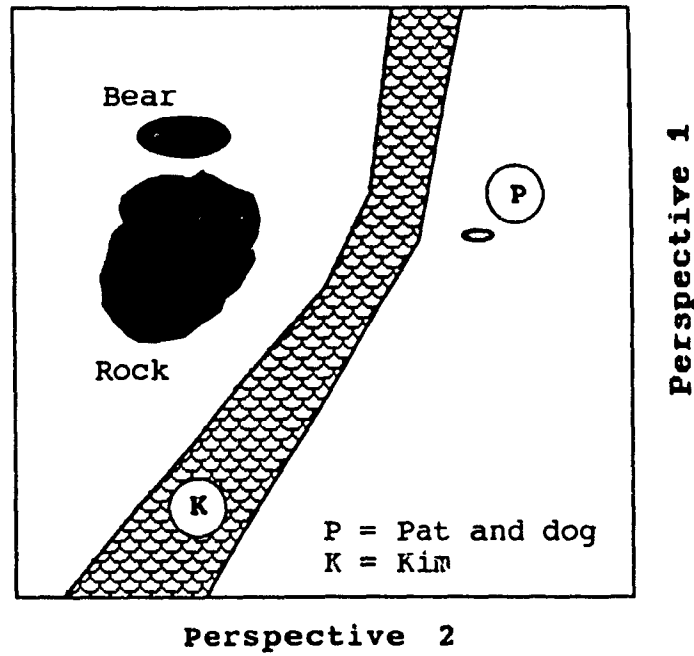
Figure 11 . *Plan of the 3-D Prop for the Birthday Party Test.*

Perspective 2
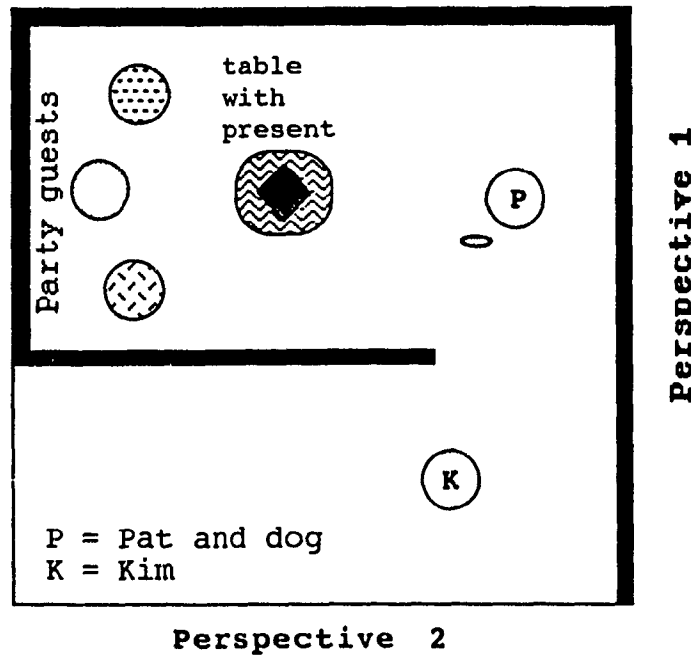
The *Boy and Bear Test* model was constructed on top of a board, approximately 12" square, covered with green felt to simulate grass. A "path" was left in exposed wood. The other objects which were attached to the board were: a realistic plastic figure of a bear, a realistic plastic figure of a dog, a rock, and two dolls which were androgynous in dress, and realistically to scale with the animal figures. Androgynous names were given to the human figures (Pat and Kim). The *Birthday Party Test* model was built into a cake box, approximately 12" square. The set was meant to simulate a room, with walls decorated with streamers, and a table at the center on which a present was clearly visible. The Pat and Kim dolls and the dog were the same as those used in the *Boy and Bear Test* model. The other figures (party guests) were also the same type of dolls. Unfortunately, the only dolls of an appropriate scale that were found were Caucasian in appearance.

Protocol

The test was presented to children as a game; each child got a turn to play. As the child arrived for testing, the model was oriented in such a way that the child could see all the elements clearly (Perspective 1). Initially, the Kim character was not placed within the model. After making sure the child was at ease with the researcher, they were asked

the following set of questions (answers being written down on the coding sheet);

1. How are you today?

2. What do you see? (indicating the prop)

3. This is Pat (pointing to the figure beside the dog). What can Pat see?

4. What is Pat doing?

5. How is Pat feeling?

6. What is Pat thinking?

7. If you were Pat, what would you do?

8. If you were Pat, how would you feel?

9. If you were Pat, what would you be thinking about?

At this point, the model was turned so that it was oriented in such a way that the child could view it from Perspective 2. Kim, the second figure, was then introduced and placed as indicated in Figures 10 and 11. From this perspective the bear and/or the interior of the party room was not visible to the child, or to someone standing where Kim was placed. The questions continued:

10. This is Kim. Kim is walking along and stops. What does Kim see?

11. What does Kim think Pat sees?

12. What does Kim think Pat is doing?

13. How does Kim think Pat is feeling?

14. What does Kim think Pat is thinking about?

If a child did not answer any of the questions, they were prompted to do so once. If they did not comply, the next question was asked. At question 10, if the child responded that Kim saw what Pat saw, they were prompted once to put their eyes at the level of Kim, whereby not all were visible. If they did not catch on, they were not prompted again. The use of a prompt was indicated on the response sheet. The sheet used to record the children's responses during the perspective taking tests (pre and post) appears in Appendix F. The same protocol was followed during both the pre and posttesting, only the model presented for viewing was altered.

Coding

In scoring the responses, children received 3 points if they answered correctly, 2 points if they answered correctly but with a prompt, 1 point if they did not answer, were not sure, or indicated they did not know, and 0 if they answered incorrectly. The totals for perceptual ability (questions 3, 10 and 11), cognitive ability (questions 6 and 14), and affective ability (questions 5 and 13) were calculated. The other questions were there mainly to establish that the child saw and identified everything on the board, and to help clarify the other answers received by providing additional information.

A summative pretest perspective-taking ability score was calculated by adding the scores for perceptual, cognitive and affective ability A separate posttest score was also calculated.

Situational Altruism

A situational test of a type of altruism, donating, immediately followed the perspective-taking test. The test has been widely referred to in the literature (Orlick, 1981b), and calls for children to donate stickers, or other objects, to a person or persons not present. In this study, children were asked to donate anonymously. Rather than soliciting donation to one child or a friend, it was elicited on behalf of another class in the daycare.

At the end of the perspective-taking test, the researcher thanked the child for playing the game, then gave them five colorful stickers. The stickers were selected from an assortment available in a clear plastic bag. There were few in the bag in order to convince children that there would not be enough for everyone in the next class. There was a "donation box" standing nearby with two unattached stickers already in it.

Protocol:

The following verbal protocol was used:

"Here are five stickers for you. I've been giving
everyone 5 but it seems I'm running short and won't have
enough for everyone in the other class. If you like, you
can share some of your stickers by putting them in this
box (indicating the donation box). That way everyone
will get some. Thanks again for playing with me."

At this point the researcher looked away, acting busy (i.e.,
re-arranging papers), and intentionally did not pay attention
to the child. This was done to reduce the pressure on the
child to donate. Once the child left, the number of stickers
donated, if any, was noted on the same response sheet as was
used during the perspective-taking task (Appendix F).
Exactly the same protocol was followed both during pre and
posttesting.

Qualitative Measures

Since random assignment of subjects to all four
conditions at each setting was not possible, and since
teacher implementation was considered fundamental to the
intervention approach taken, the research design presented
several considerable threats to internal and external
validity which could not be controlled. As a result,
treatment effects, if they existed, could not be interpreted

without taking contextual influences into account. Two qualitative measures were designed to provide contextual information not available from the quantitative measures alone. Threats to internal validity taken into consideration were: history during treatment implementation; deviation from standard treatment implementation; and testing (the type of free-play provided during observational sessions was potentially atypical, and confounding). Threats to external validity taken into consideration were population and ecological effects (setting-treatment interaction, novelty/ disruption effects, and measurement-treatment interaction).

Description of Field Setting

A *Description of Field Setting* questionnaire was filled out by the observers during the last day of posttest observations. The measure included narrative descriptions of characteristics of the daycare environment and the organization of the existing program, such as: caregiver-child ratios, number of classes, age-group divisions, ethnic diversity, patterns of television viewing, type of activity centers available, program components, and schedules. In addition to this, the setting was rated using the *Early Childhood Environment Observation Instrument* (Bredekamp, 1985, cited in Holloway & Reichhart-Erickson, 1988). This rating scale included commentary regarding: (a) staff-child

interactions, (b) child-child interactions, and (c) aspects of the physical environment. Items were rated using a three-point scale: all answers of "often" were coded 2, answers of "sometimes" were coded 1, and answers of rarely" were coded 0. A sum score for each scale was calculated. There was a more comprehensive and extensively used rating scale available in the literature (Harms & Clifford, 1980), but it was too long and detailed for the purpose at hand. The final version of the *Description of Field Setting* questionnaire is presented in Appendix G.

Caregiver Daily Log

Caregivers were asked to comment on the success of the treatment after each day on a daily log sheet. These data were gathered to provide a qualitatively evaluative response to the program on a day-to-day basis. From these data one could ascertain if caregivers had followed the explicit directions provided for implementing the post-viewing activities. Furthermore, since caregivers were asked to state if they had done any activity remotely similar with their class prior to this, one could get a better picture of whether there might be a novelty or reinforcement effect at work. A sample caregiver daily log sheet is attached in Appendix H.

Procedure

Pilot Testing

The design of the program and the measures chosen were pilot tested at one of the participating daycares. The purpose was to assess if the theoretical perspective adopted, as expressed in the design of the intervention program and chosen methods of assessing any potential effects, would in fact be conducive to a typical daycare environment. This was ascertained by direct use of the measures, following by the required refinements, and by requesting that two caregivers implement the entire program and provide as detailed feedback as they felt was necessary.

Caregiver Feedback

The caregivers provided feedback by discussing the program with the researchers, actually editing portions of the instruction sheets, and by filling out daily log sheets for the eight days of the program. Based on their comments, minor modifications were made to certain activities. Primarily, these involved providing alternative activities (i.e., where there was a shortage of floor space to proceed as originally planned), suggesting alternative materials (i.e., if for instance wood blocks are not available), and

rewording certain sections of the instruction sheets for more clarity.

The caregivers were also each asked to rate the same three children using the *Preschool Social Behavior Questionnaire* (pretest only since it included the complete set of questions). They were asked to do so independently, without any discussion among themselves. They found the questionnaire useful and accepted it without modification. They did not object to the length. The inter-rater reliability between the two caregivers was satisfactory - there was agreement on 94% of the questions.

Overall, the two caregivers who participated during pilot-testing indicated that they found the program useful and enjoyable for both themselves and the children. They did not find it difficult to implement, nor overly disruptive to their regular schedule of activities.

Direct Use of Measures

Pilot testing provided the opportunity to train the research team in conducting the perspective-taking tests and the situational test of altruism. Difficulties with these measures did not emerge. Furthermore, children spontaneously indicated that they enjoyed the testing activity.

Refinements were made to the observational scheme in that the structured approach was discarded in favor of

unstructured free-play observations, as previously discussed. Pilot-testing helped the research team refine their understanding of the operational definitions of behavior to be coded, as well as reach and maintain an acceptable standard of inter-rater reliability during observations. Inter-observer agreement for the observations was assessed using a standard formula (Bakeman & Gottman, 1986):

$$Pa = \frac{Na}{Na + Nd} \times 100$$

Pa = percentage of agreement
Na = number of agreements
Nd = number of disagreements

An agreement was the rating of the same type and number of behavioral acts for the same child in the same interval for each pair of observers. The level of inter-observer agreement reached during pilot testing was 81%.

Administration of Treatment

A *Summary Protocol Form for Research with Human Subjects* was filled and approved by the Ethics Committee of Concordia University. Permission was received on behalf of all participating children in the study in the form of a letter signed by a parent (a sample is included in Appendix I). In total, permission was requested but not granted on behalf of three children; they were not part of the sample.

Research Team

The research team consisted of four members: a project director and research coordinator; a principal on-site researcher; and two assistant on-site researchers. Each took charge of different aspects of implementing the study.

The responsibilities of the coordinator were to: solicit and select research settings; randomly assign settings to conditions; make personal contact with each daycare setting director, in order to agree on schedules and select classes for inclusion in the study; provide equipment and materials where necessary and train participating caregivers in implementing the program; be available for consultation if any problems arose during program implementation or data collection; and be able to fill in as a data collector if necessary.

The responsibilities of the principal on-site researcher were to: coordinate the activities and schedules of the other members of the team; be the principal observer and researcher conducting pre and posttesting; randomly assign children to test-type 1 or 2 for pre and post perspective-taking ability testing; make sure enough reliability data during observations were collected; make sure the entire data package per site was complete; and fill out the *Description of Field Setting* forms in consultation with other on site members of the team.

The other two team members were graduate students in early childhood education programs whose primary task was to provide reliability data during observations, as well as do some of the perspective-taking ability and donating behavior testing if necessary. All of the members of the team (except for the coordinator) were blind to condition for all but the first two settings (six out of eight).

Schedule

Testing took place between November 1990 and April 1991. The settings were tested two at a time, with a schedule that overlapped by one week. The presence of the research team at each site was required for a four week period. Taking into consideration the one week overlap, a pair of two settings was tested within the course of five weeks. Subsequently, either a new set would be commenced immediately, or there would be a week's grace in between. There was some deviation from this schedule in the case of public holidays, or where a daycare had to postpone implementing the program due to unforeseen circumstances.

The entire set of four conditions was run twice, in this way two settings were assigned to condition. The order of testing of conditions was as follows: PTPA-1, NTNA-1, NTPA-1, PTNA-1, NTNA-2, PTPA-2, PTNA-2, and NTPA-2. The detailed procedure per pair of settings went as follows:

Week 1.

The coordinating researcher visited the first field setting on one or two occasions during which they would: (a) select classes for participation in the study and get class lists; (b) coordinate and finalize the research schedule with the daycare director and caregivers; (c) give pretest *Preschool Social Behavior Questionnaires* to the participating caregivers and request them to be filled out within a week; (d) give parent consent forms to the director for distribution to parents; (e) train the principal caregiver in implementing the program; and (f) deliver the required program materials (VHS tape, VCR and TV if required, instruction sheets, daily log sheets, and the complete set of materials to accompany activities).

On the last day of the week, the data collection team arrived on site. First, the parent consent forms were collected; if any children were not to participate, they were omitted from the class list. From the class list, individuals were randomly assigned to either Type 1 (*Boy and Bear*) or Type 2 (*Birthday Party*) perspective-taking ability test.

The team then proceeded with as much of the perspective-taking and donating behavior testing as possible. Since this was done on an individual basis, the amount of time allotted by the daycare for this was often insufficient. If this was the case, testing continued during the three days of pretest observations the following week. Testing took place in a

quiet section of the main room where the children normally spent their time, or in an attached space which was within sight of the main room. This was done to assure that children would not be reluctant, afraid, or shy to leave their teacher and group in order to interact with the researcher in private.

The end of the week was spent in randomly creating an order of observation for all six days of observation (pre and post). This was done using the class list, and a stack of numbered (from 1 to the number of children in that particular class) slips of paper. A slip was pulled from the stack, and that number was given to the next child on the list. This was repeated for the next day of observations. By preparing the sheets in advance, time was saved on site. Research at the second site began the following week.

Week 2.

The data collection team continued at the first setting, for three days of consecutive pretest observations. This was typically during a time that the daycare regularly scheduled some sort of free-play period. For about half the settings this occurred in the morning, while for the rest, in the afternoon, after nap-time.

Normally, two observers were present during two out of the three days of observation. Each day began with a few minutes where children were identified by their clothes or

physical characteristics (on the observations coding sheet), in order to facilitate locating them when their turn to be observed came up. About five minutes were allowed before formal observations began in order to let children settle down to their games and activities. Then, each child was observed for two minutes, in accordance to the pre-established order. The principal observer carried a stop watch which beeped softly at the end of two minutes, at which time eyes searched for the next subject to be observed. If that child was absent, the next child on the list was observed. If they were missing from the room, or interacting with the teacher, the next child was observed. A return to the child skipped was made at the end of the next observation period if possible. The observers moved through the room, keeping a careful balance between being close enough to hear conversation, but far enough not to attract undue attention to themselves. They did not interact with the children out of their own initiative, but if the children initiated an exchange, it was kept to a minimum (ie., as in being asked to tie someone's shoe). Interaction between the two observers was kept at a minimum as well, just enough to cue the commencement of each two-minute observation interval. Only peer-related behavior was coded.

After observations, perspective-taking ability and donating testing continued for the children not yet tested, or those who were absent the week before. At the end of

observations on the third day, the pretest *Preschool Social Behavior Questionnaires* were collected.

The program began on the next day (Thursday). The caregivers themselves implemented the program, without supervision from the research team, leaving the existing ecosystem of the field setting intact as much as possible. The program was always implemented at the same time each day. The actual time was chosen by the caregiver implementing the program (one where most of the children would normally be present). Day 1 and Day 2 of the program were completed that week. The same procedure as at the first setting during the first week, was followed at the second setting.

Week 3.

The entire third week at the first setting consisted of the caregiver implemented Day 3 to Day 7 of the program. The procedure at the second setting was identical to that for Week 2, setting 1.

Week 4.

On Monday, the caregiver completed the last day of the program, Day 8. The next day, the data collection team arrived for three consecutive days of posttest observations. On the first day, the posttest *Preschool Social Behavior Questionnaires* were given to the caregivers, with specific instructions that they had to be completed before the end of

the week. Observations were conducted at the same times that they were conducted during pretesting. As before, all attempts were made to have two observers present for two out of the three days.

Prior to free-play observations, or after, depending on what was convenient for the daycare staff, the posttest perspective-taking ability and donating testing took place on an individual basis. All attempts were made to complete this cycle of tests as soon after the end of the treatment as possible.

On the third day of observations, ideally the last day of the team's presence at that setting, the posttest *Preschool Social Behavior Questionnaires* were collected, and the *Description of Field Setting* questionnaire was completed.

At the second setting, the same protocol as for Week 3, Setting 1 was followed.

Week 5.

Field testing was already completed at the first setting. Testing was wound up at the second setting the same way as at the first setting the preceding week. Table 3 presents an overview of the schedule per pair of daycare settings.

Table 3   <u>Research Schedule</u>

	Setting A	Setting B
Week 1:		
	Train Caregivers	
	Get schedules & class lists	
	Give permission letters	
	Give Pre-PSBQ	
Fri	Get permission letters	
	Pretest Perspective-Taking	
	Pretest Donating	
Week 2:		
Mon	Get Pre-PSBQ	Train Caregivers
	Pre-Observations-1	Get schedules & class lists
		Give permission letters
		Give Pre-PSBQ
Tue	Pre-Observations-2	
Wed	Pre-Observations-3	
Thu	Treatment Day 1	
Fri	Treatment Day 2	Get permission letters
		Pre Perspective-Taking
		Pre Donating
Week 3:		
Mon	Treatment Day 3	Pre-Observations-1/Get Pre-PSBQ
Tue	Treatment Day 4	Pre-Observations-2
Wed	Treatment Day 5	Pre-Observations-3
Thu	Treatment Day 6	Treatment Day 1
Fri	Treatment Day 7	Treatment Day 2
Week 4:		
Mon	Treatment Day 8	Treatment Day 3
Tue	Post-Obs-1	Treatment Day 4
	Give Post-PSBQ	
	Post Perspective-taking	
	Post Donating	
Wed	Post-Observations-2	Treatment Day 5
Thu	Post-Observations-3	Treatment Day 6
	Field Setting Description	
	Get Post-PSBQ	
	Get Daily Log Sheets	
Fri		Treatment Day 7
Week 5:		
Mon	Field Testing over	Treatment Day 8
Tue		Post-Observations-1/Give Post-PSBQ
		Post Perspective-taking & Donating
Wed		Post-Observations-2
Thu		Post-Observations-3
		Field Setting Description
		Get Post-PSBQ & Daily Log Sheets

Data Treatment and Statistical Procedure

The results from all the measures were coded directly on the data sheets (questionnaires, observation sheets, etc.). The coding was then verified. Where judgment and interpretation of results was required (as in the perspective-taking data where children's verbal responses were noted), a second person verified a random selection of coded sheets to make sure agreement was reached as to the interpretation of responses.

The coded data was entered onto FORTRAN coding sheets, and verified again. The complete sheets were then entered onto the VAX 2 network and verified by the staff of the Computer Centre at Concordia University. From a printout of the complete database, randomly selected cases were checked a final time against the original coded data sheets.

The analyses for this study were conducted using the Statistical Package for the Social Sciences (SPSS, 1990). The analytical procedure was in accordance with a 2 x 2 x 2 factorial design, with video-type (prosocial, cognitive), activity-type (cooperative, individualistic) and sex as the factors. Age and the pretest were used as covariates. Certain screening procedures using the pretest data were undertaken prior to the core analyses.

<u>Inter-rater Reliability</u>

<u>Observations</u>

To test the reliability of observations, two observers were used for 46% of observations. The overall level of agreement reached, taking into account both pretest and posttest observations, was 94% (calculated as the percentage of agreements to total number of observed occurrences).

<u>Caregiver Ratings</u>

Reliability between two caregivers rating the same child was obtained for two settings (N children = 36; 3 from the pilot testing setting, and 33 from the first treatment setting). Univariate analysis of variance on the sum scores in the different categories did not show any significant differences between the two raters, in those two settings.

<u>Test-Type Equivalence</u>

Since there were two types of perspective-taking test, the equivalence of the tests had to be established. Multivariate analysis of variance using Hotelling's Trace test was conducted (with the three types of perspective taking ability combined) and the result, $F(3, 136) = 15.77$,

was significant, p < .01, indicating that the groups according to test-type were not equivalent. Univariate analysis of variance for the three types of perspective-taking ability was calculated, and a significant difference emerged for perceptual ability, F (1, 138) = 45.63, p < .01. There was no significant difference for cognitive and affective ability, using a more conservative alpha (α = .15) for group equivalence testing.

A closer look at the design of the test materials (3-D props) revealed that in fact one of the tests was easier. To correct this, the perceptual ability score (pretest and posttest) was recoded, eliminating the level of coding from which the problem stemmed (question 11 of the testing protocol). A second multivariate test of significance was calculated and showed that the test-type groups were now equivalent, p > .15.

Treatment Group Equivalence

The equivalency of groups prior to treatment was tested using analysis of variance across the four conditions, using the more conservative alpha indicated above. In order to establish more in-depth equivalence among the treatment groups, analysis of variance was also conducted by daycare setting. Each measure was examined separately. Ideally, equivalence was sought for all measures so that multivariate

testing could be conducted.

Since differential tendencies for prosocial or antisocial behavior for boys and girls were possible, the subjects were divided by sex, and analysis of variance was conducted for each sex separately across the four conditions. However, this was only done for the behavioral measures, and not perspective-taking ability, which is more sensitive to developmental stages than to sex differences.

Observational Data

Prosocial Behavior. Univariate analysis of variance revealed that the four treatment groups were equivalent on the score for total pretest prosocial behavior (p > .15). Analysis of variance was conducted across the eight daycare settings, and groups were found to be equivalent as well. The subjects were divided by sex, and analysis of variance was conducted for each sex separately across the four conditions. Groups were found to be equivalent both for boys and girls. Table 4 presents the means and standard deviations for observed prosocial behavior for the entire sample.

Table 4

Pretest Observed Prosocial Behavior: Means and Standard
Deviation by Condition, Sex and Daycare Within Condition

	CONDITION			MALES			FEMALES			DAYCARE		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
PTPA	1.82	1.43	40	1.80	1.67	20	1.83	1.19	20	1.56	1.19	24
										2.21	1.70	16
PTNA	2.03	1.15	30	2.04	1.34	13	2.03	1.03	17	1.59	0.89	15
										2.47	1.24	15
NTPA	2.17	1.46	30	2.03	1.43	12	2.26	1.51	18	1.96	1.45	15
										2.38	1.48	15
NTNA	2.07	1.51	29	1.95	1.29	16	2.22	1.79	13	2.21	1.61	16
										1.89	1.42	13
TOTAL SAMPLE	2.00	1.39	129	1.94	1.43	61	2.07	1.35	68			

Note. Out of the total sample of 150, 21 subjects were omitted due to missing data.

Antisocial Behavior. Univariate analysis of variance revealed that the four treatment groups were equivalent on the score for total pretest antisocial behavior observed, p > .15. Analysis of variance was conducted across the eight daycare settings and the groups were found to be equivalent as well. The subjects were divided by sex and analysis of variance was conducted for each sex separately across the four conditions. Groups were found to be equivalent for both boys and girls. Table 5 presents the means and standard

deviations for observed antisocial behavior for the entire sample.

Table 5

Pretest Observed Antisocial Behavior: Means and Standard Deviations By Condition, Sex and Daycare Within Condition

	CONDITION			MALES			FEMALES			DAYCARE		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
PTPA	0.58	1.04	40	0.82	1.29	20	0.33	0.65	20	0.59	1.11	24
										0.56	0.94	16
PTNA	0.58	0.85	30	0.65	0.64	13	0.53	0.99	17	0.72	0.89	15
										0.45	0.81	15
NTPA	0.45	0.63	30	0.61	0.69	12	0.34	0.59	18	0.62	0.73	15
										0.28	0.48	15
NTNA	0.78	1.00	29	1.11	1.20	16	0.37	0.45	13	0.91	1.02	16
										0.62	0.99	13
TOTAL SAMPLE	0.59	0.90	129	0.82	1.05	61	0.39	0.70	68			

Note. Out of the total sample of 150, 21 subjects were omitted due to missing data.

Preschool Social Behavior Questionnaire

Multivariate analysis of variance using Hotelling's Trace test was conducted on the caregiver ratings (with the sum scores for pretest prosocial behavior, anxious-disruptive behavior, and anxious-disruptive personality). The result,

F (12, 413) = 9.70, was significant, p < .01, indicating that the groups as divided by condition were not equivalent. Univariate analysis of variance tests showed that the groups were non-equivalent on all three question cluster scores (using the more conservative α = .15). Table 6 presents the means and standard deviations per question-cluster for each condition. Since non-equivalence was found between groups as divided by condition, the means per daycare or by sex are not presented.

Table 6

Pretest Caregiver Ratings of Social Behavior: Means and Standard Deviations by Condition

Condition	N	Prosocial Behavior Mean	S.D.	Anxious-disruptive Behavior Mean	S.D.	Anxious-disruptive Personality Mean	S.D.
PTPA	52	16.15	7.72	4.89	3.86	6.10	4.42
PTNA	29	27.07	9.38	5.97	4.95	8.52	5.88
NTPA	32	22.38	8.61	7.47	4.30	8.81	4.14
NTNA	33	24.21	7.85	5.55	4.54	6.79	5.96
Total Sample	146	21.51	9.26	5.82	4.40	7.33	5.14

Note. Out of the total sample of 150, 4 subjects were omitted due to missing data.

Since the observational pretest data qualified the groups as equivalent, other explanations regarding the non-equivalence found using pretest caregiver ratings were explored. Of interest was the concurrent validity between the ratings and observations, and the "internal corcurrent validity" which might be expected between the three question clusters of the rating questionnaire. If these relationships were inconsistent across conditions and settings, as might be expected if the observational data is in fact stable, then the rationale for arguing that group-equivalence was attained would be strengthened. The conclusion being that the non-equivalence found using caregiver ratings was the result of an unstable measure rather than non-random assignment.

Concurrent Validity: Observations and Caregiver Ratings. It was assumed initially that both the free-play observations and the caregiver ratings, administered within the same week, were assessing the same prosocial and antisocial behaviors. In fact, the operationally defined observational categories were reflected in the questions on the caregiver rating scale. Pearson r correlation coefficients were calculated to describe the degree of relationship, or concurrent validity, actually found between the two measures. Since the groups were found to be non-equivalent according to the caregiver ratings, and equivalent according to the free-play observations, a low relationship between the two measures was

expected.

When testing the entire sample, no significant correlation was found between observed prosocial behavior and caregiver ratings of prosocial behavior. In terms of observed antisocial behavior, a low but significant correlation was found with caregiver ratings of anxious-disruptive behavior, $r = .37$, $p < .01$. However, a significant relationship did not follow for observed antisocial behavior and caregiver ratings of anxious-disruptive personality.

Looking at the correlations setting by setting, revealed that the correlations found for the entire sample did not hold for all the settings individually. The significant correlation between observed antisocial behavior and caregivers rating of anxious-disruptive behavior was only found in two out of the eight settings. Table 7 presents the correlation coefficients for the entire sample, as well as setting by setting.

Table 7

Relationship Between Pretest Caregiver Ratings and Free-Play
Observations

Total Sample (n = 125)			
	P	AB	AP	Key
Pro	.101	.067	-.038	Caregiver Ratings:
				P = PROSOCIAL BEHAVIOR
				AB = ANXIOUS-DISRUPTIVE BEHAVIOR
Anti	-.086	.373**	.066	AP = ANXIOUS-DISRUPTIVE PERSONALITY
				Free-Play Observations:
** = significant at .01				Pro = PROSOCIAL BEHAVIOR
* = significant at .05				Anti = ANTISOCIAL BEHAVIOR

PTPA	Setting 1 (n = 24)			Setting 2 (n = 16)		
	P	AB	AP	P	AB	AP
Pro	.009	-.039	-.189	-.018	.114	.044
Anti	-.117	.443*	.041	-.433	.262	-.091

PTNA	Setting 1 (n = 14)			Setting 2 (n = 13)		
	P	AB	AP	P	AB	AP
Pro	-.091	.000	-.155	-.237	.309	.311
Anti	-.442	.492	.297	.188	.111	-.223

NTPA	Setting 1 (n = 15)			Setting 2 (n = 16)		
	P	AB	AP	P	AB	AP
Pro	.513	.060	-.246	-.188	.150	.238
Anti	.419	.414	-.058	.244	.285	.007

NTNA	Setting 1 (n = 16)			Setting 2 (n = 13)		
	P	AB	AP	P	AB	AP
Pro	.157	.085	.122	.133	-.313	-.492
Anti	-.298	.786**	.495	-.183	.401	.123

Note. Out of the total sample of 150, 25 subjects were
omitted due to missing data.

Within-Questionnaire Concurrent Validity. Within the caregiver rating questionnaires, certain relationships might be expected: (a) that prosocial behavior may be negatively correlated with antisocial behavior, and (b) that antisocial behavior may be positively correlated with anxious-disruptive personality. To test these assumptions of "concurrent internal validity", Pearson r correlation coefficients were calculated between question categories.

Certain expected relationships were confirmed. The two antisocial behavior question clusters (anxious-disruptive personality and behavior) were significantly correlated, $r = .61$, $p < .01$. A low but significant negative correlation was found between caregiver ratings of prosocial behavior and anxious-disruptive personality, $r = -.39$, $p < .01$, and between caregiver ratings of prosocial behavior and anxious-disruptive behavior, $r = -.35$, $p < .01$. However, when looking at the correlations setting by setting, it was found that results for the entire sample did not hold for each individual setting. Out of the total of eight settings, six showed a significant correlation between ratings of anxious-disruptive behavior and anxious-disruptive personality, five showed a significant negative correlation between ratings of prosocial behavior and anxious-disruptive personality, and only three a significant negative correlation between ratings of prosocial behavior and anxious-disruptive behavior. Table 8 presents results.

Table 8

Relationship Between Within Questionnaire Categories

	Total Sample (n = 146)			Key
	P	AB	AP	
P	1.000			P = PROSOCIAL BEHAVIOR
AB	-.347**	1.000		AB = ANXIOUS-DISRUPTIVE BEHAVIOR
AP	-.388**	.611**	1.00	AP = ANXIOUS-DISRUPTIVE PERSONALITY ** = significant at .01 * = significant at .05

PTPA	Setting 1 (n = 33)			Setting 2 (n = 19)		
	P	AB	AP	P	AB	AP
P	1.000			1.000		
AB	-.296	1.000		-.472	1.000	
AP	-.447*	.579**	1.00	-.257	.684**	1.00

PTNA	Setting 1 (n = 15)			Setting 2 (n = 14)		
	P	AB	AP	P	AB	AP
P	1.000			1.000		
AB	-.571*	1.000		-.553	1.000	
AP	-.771**	.448	1.00	-.371	.186	1.00

NTPA	Setting 1 (n = 16)			Setting 2 (n = 16)		
	P	AB	AP	P	AB	AP
P	1.000			1.000		
AB	-.324	1.000		-.508	1.000	
AP	-.357	.572*	1.00	-.619*	.705**	1.00

NTNA	Setting 1 (n = 17)			Setting 2 (n = 16)		
	P	AB	AP	P	AB	AP
P	1.000			1.000		
AB	-.549*	1.000		-.715**	1.000	
AP	-.737**	.792**	1.00	-.822**	.841**	1.00

Note. Out of the total sample of 150, 4 subjects were omitted due to missing data.

Because of the inconsistent results obtained from the pretest *Preschool Social Behavior Questionnaire*, this measure was dropped from the analysis. One can only speculate as to the source of the inconsistencies, and why the validity of this measure was questionable. In effect, since different caregivers rated different children at different centers, the variation in results may have been due to caregiver differences, child differences, or setting differences. It is not possible to tease out which was the overriding cause.

Perspective-Taking Ability

Multivariate analysis of variance using Hotelling's Trace test was conducted to compare the groups by condition, as well as by daycare setting. The group were found to be equivalent (p > .15).

As a more detailed check, univariate analysis of variance between treatment groups on each of the three types of perspective-taking ability was also calculated. Although equivalence was established for pretest perceptual and affective ability scores, non-equivalence was found for pretest cognitive ability score, F (3, 136) = 2.07, p < .15. However, since a sum score of all three types of ability was to be used in the final analysis, and since the multivariate result w, s acceptable, it was decided not to reject the measure due to this partial non-equivalence.

Table 9 presents the means and standard deviations for pretest perspective-taking ability scores.

Table 9

Means and Standard Deviations for Pretest Perspective-Taking Ability

	CONDITION			DAYCARE		
	Mean	S.D.	N	Mean	S.D.	N
PTPA	11.38	3.24	48	11.90	2.90	31
				10.41	3.68	17
PTNA	12.44	3.23	32	12.20	2.46	15
				12.65	3.86	17
NTPA	10.78	2.72	27	12.15	2.58	13
				9.50	2.25	14
NTNA	11.97	2.31	33	11.77	2.20	17
				12.19	2.48	16
TOTAL SAMPLE	11.64	2.97	140	11.64	2.97	140

Note. Out of the total sample of 150, 10 subjects were omitted due to missing data.

Situational Altruism

Before testing for group equivalence, the number of children that shared within each treatment group was calculated. Table 10 reports total pretest sharing.

Table 10

Pretest Sharing

Condition	Setting 1	Setting 2	Total
PTPA	7	2	9
PTNA	2	1	3
NTPA	0	1	1
NTNA	4	3	7
Total Sample			20

Note. The number of children who shared stickers is shown.

Results indicated that there was very little donating behavior during the situational altruism test. Out of the entire sample of 150, only 20 shared stickers. Due to the small cell totals (including zero in one setting), and uneven distribution across the four treatment groups, statistical analysis of group equivalence across conditions was not possible. This measure was dropped from further analysis.

It is worth noting however, that posttest results showed that 20 children shared stickers as well: out of these 20, 11 had also shared during the pretest, while 8 had not (the remaining one did not complete a pretest). The children who had not previously shared, were more or less evenly distributed across the four conditions (PTPA = 3; PTNA = 1; NTPA = 2; and NTNA = 2).

Testing the Covariates

In order to further lessen the threat of non-random selection to internal validity, the pretest and age were used as covariates in the design. Analysis of variance was conducted to test the significance of the combined covariates, and to establish that there was no interaction with the three factors in the design (video-type, activity-type and sex). An alpha (α) level of .05 was used for testing the covariates. This procedure was only conducted on the observational data and the perspective-taking ability data since only these two measures were retained after the group equivalence screening procedures.

Observational Data

Prosocial Behavior. The two covariates combined (age, pretest) were found to be significant for observed prosocial behavior, $F (2, 107) = 8.03$, $p < .01$. No significant interactions between the covariates and the three factors emerged.

Antisocial Behavior. The two covariates combined were found to be significant for observed antisocial behavior as well, $F (2, 107) = 10.05$, $p < .01$. There were no significant interactions found between the covariates and the three factors in the design.

On the basis of these preliminary analyses it was decided that treatment effects could be analyzed using the prosocial and antisocial free-play observational data.

Perspective-Taking Ability

Having established treatment group equivalence, the combined score of the three types of perspective-taking ability was used for all further analyses. Analysis of variance was conducted to test the significance of pretest perspective-taking ability and age as covariates. The combined covariates were found to be significant, $F (2, 104) = 17.30$, $p < .01$. No significant interactions between the covariates and the three factors in the design were found.

Multivariate Testing

The review of the literature suggests that there may be a positive correlation between perspective-taking ability (or empathic ability as it is sometimes referred to), and prosocial behavior. This assumption was tested, with the aim that if such a relationship were confirmed using the present measures, perspective-taking ability might be an effective covariate, and might allow for multivariate testing of treatment effects.

A Pearson r correlation coefficient was calculated for the relationship between pretest observed prosocial behavior and the pretest perspective-taking ability score. No significant correlation between the two measures was found.

Based on these results, the perspective-taking ability test scores would be used for analysis of treatment effects on perspective-taking ability. However, no multivariate testing was possible, nor was perspective-taking ability, as measured, found to be a predictor of prosocial behavior.

RESULTS

Prosocial Behavior

Omnibus F Test

A 2 (sex) x 2 (video-type) x 2 (activity-type) factorial analysis of covariance, using the pretest and age as covariates and total observed posttest prosocial behavior (including all categories coded) as the dependent measure, yielded no significant interactions between the factors. However, a significant main effect for video-type was found, $F (1, 120) = 5.40$, $p < .05$. There was a significant difference between the combined adjusted mean for prosocial video-type viewing ($M = 3.35$), and the combined adjusted mean for neutral video-type viewing ($M = 2.60$). Sex was not a significant factor in the design.

The results show that children in the conditions that viewed a prosocial content videotape were significantly more prosocial in their behavior after treatment compared with children who viewed a neutral (cognitive) content videotape (Figure 12). Observed means, standard deviations and adjusted means by condition are reported in Table 11.

Figure 12. *Observed posttest prosocial means (main effect for video-type).*
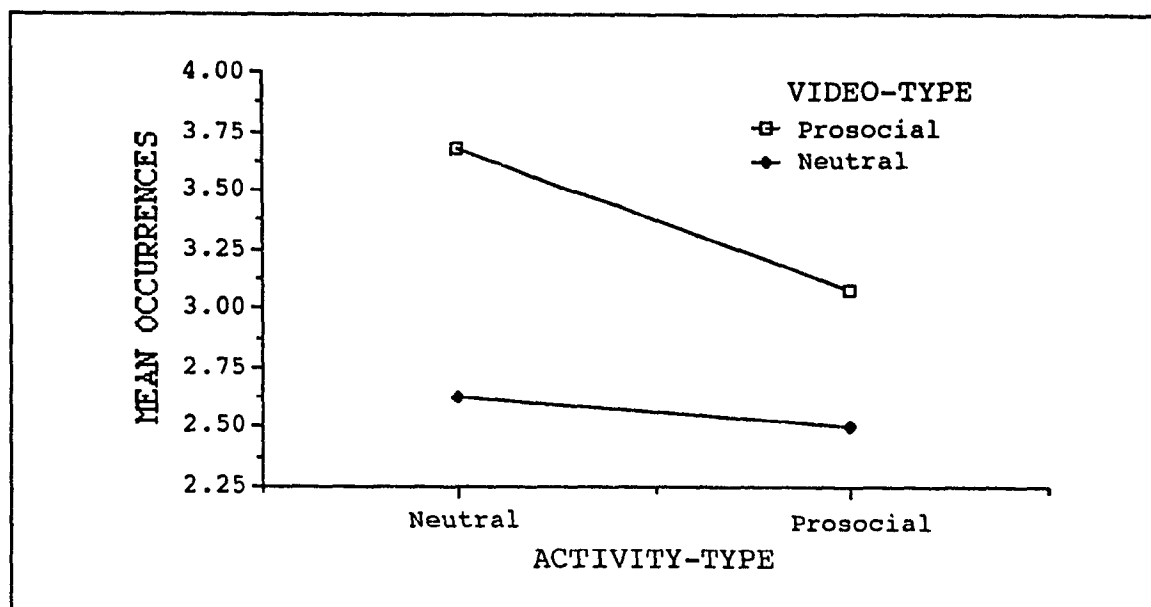
Table 11

Observed Posttest Prosocial Behavior Per Condition: Adjusted Means, Observed Means and Standard Deviations

	Adjusted Means	Observed Means	S.D.	N
PTPA	3.08	2.98	1.91	40
PTNA	3.68	3.68	2.14	30
NTPA	2.50	2.58	1.18	29
NTNA	2.63	2.65	1.60	29
Total Sample		2.98	1.79	128

Note. Out of the total sample of 150, 22 subjects were omitted due to missing data.

Hypothesis Testing

It was hypothesized that children in the three conditions with some form of prosocial training (PTPA, PTNA, and NTPA) would show more prosocial behavior than children who did not receive any training (NTNA). This assumption was tested and significant differences between the adjusted means for all four conditions, $F(3, 122) = 2.81$, $p < .05$ were found. Post-hoc joint univariate Scheffé analysis of covariance comparing pairs of adjusted means revealed that only the mean ($M = 3.68$) for children in the PTNA condition was significantly higher than the mean ($M = 2.63$) for children in the NTNA condition, $t(122) = 2.41$, $p < .05$.

Although it was hypothesized that the combined instructional strategy would be more effective in training children to be prosocial than either of the one instructional strategy conditions, results did not confirm this. Although the adjusted mean ($M = 3.08$) for observed prosocial behavior in the PTPA was higher than the adjusted mean in the NTPA condition ($M = 2.50$), the difference was not statistically significant. Furthermore, the adjusted mean in the combined instructional strategy condition ($M = 3.08$) was lower than that in the PTNA condition ($M = 3.68$), suggesting that the combination of two instructional strategies may not necessarily be more effective than the use of only one.

In comparing the use of one type of prosocial training over the other, the adjusted mean for children in the PTNA

condition was significantly higher than that for children in the NTPA condition, t (122) = 2.54, p < .05. In fact, the adjusted means for children in the NTNA and NTPA conditions were very similar (2.63 and 2.50 respectively).

Types of Prosocial Behavior Observed

A descriptive assessment of overall prosocial behavior for the entire sample, shows that there was an increase of approximately 33% from pre to posttesting, in the number of total instances of prosocial behavior observed. Due to substantial missing data and the fact that certain operationally defined categories of prosocial behavior occurred rarely, it was not possible to report pre to posttest differences by category, per condition.

There were 264 observed occurrences of prosocial behavior during pretest observations, and 351 during posttest observations. The proportion of each category to the overall sum remained more or less the same. Results suggest that the treatments did not target any one specific type of prosocial behavior. Approximately half of the total observed instances of prosocial behavior, both before and after treatment, were coded as "Positive Interaction". Approximately one quarter of total observed instances were coded "Cooperation", and the remainder was distributed among the other categories, with "Sharing" and "Helping" occurring most frequently. Table 12

reports pretest and posttest observed prosocial behavior by category.

Table 12

Observed Prosocial Behavior by Category

Prosocial Behavior	Pretest		Posttest	
Total number of occurrences:	N=264	100%	N=351	100%
Positive Interaction	125	47%	179	51%
Cooperation	61	23%	96	27%
Helping	24	9%	25	7%
Giving	8	3%	7	2%
Affection	9	4%	3	1%
Comforting	0	0%	0	0%
Turntaking	9	4%	10	3%
Sharing	22	8%	28	8%
Other	5	2%	3	1%
Combination	1	0%	0	0%

Note. Percentages indicate the proportion of total observed occurrences attributed to each category.

Antisocial Behavior

Omnibus F Test

A 2 (sex) x 2 (video-type) x 2 (activity-type) factorial analysis of covariance, using the pretest and age as covariates and total observed posttest antisocial behavior (including all categories coded) as the dependent measure, revealed a significant interaction for video-type x activity-type, F (1, 120) = 4.05, $p < .05$ (Figure 13). There were no significant interactions found between the training factors and sex. Observed means, standard deviations and adjusted means by condition are reported in Table 13.

Figure 13. *Observed posttest antisocial behavior (video-type X activity-type interaction).*
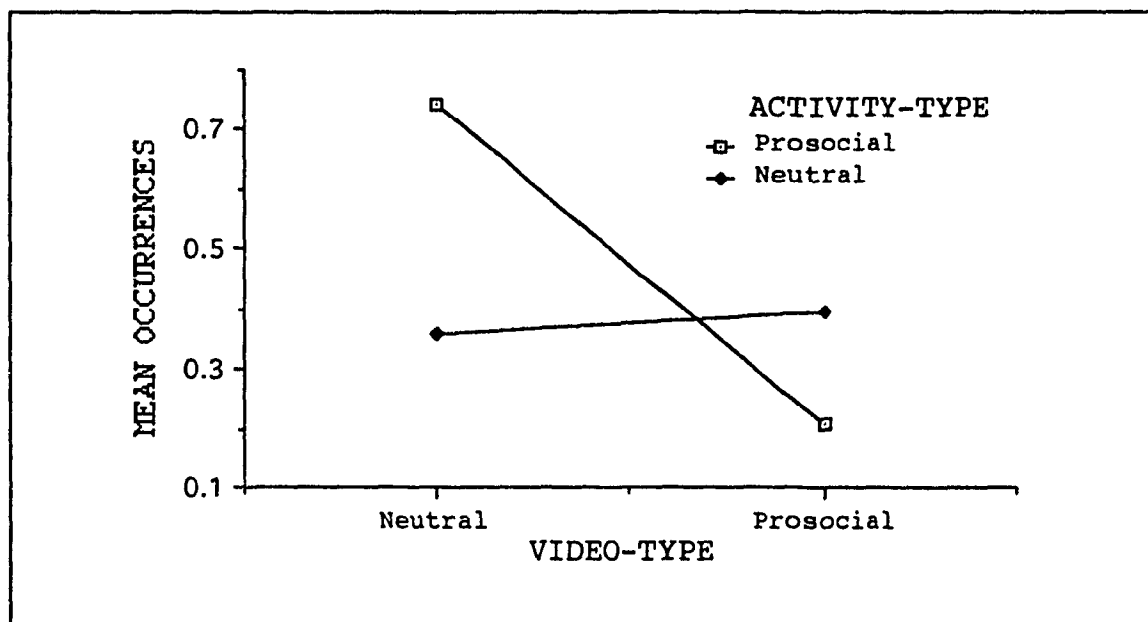
Table 13

Observed Posttest Antisocial Behavior Per Condition: Adjusted
Means, Observed Means and Standard Deviations

Condition	Adjusted Means	Observed Means	S.D.	N.
PTPA	0.21	0.20	0.44	40
PTNA	0.39	0.37	0.56	30
NTPA	0.74	0.75	1.15	29
NTNA	0.36	0.38	0.53	29
Total Sample		0.41	0.73	128

Note. Out of the total sample of 150, 22 subjects were
omitted due to missing data.

Hypothesis Testing

Since the study was aimed at prosocial behavior, no
direct hypotheses were formulated for its effects on
antisocial behavior. However, it was of interest to note if
children in the three conditions with some form of prosocial
training (PTPA, PTNA, and NTPA) would show less antisocial
behavior than children who did not receive any training
(NTNA). This assumption was tested and significant
differences between the adjusted means for all four
conditions, F (3, 122) = 3.30, $p <$ .05 were found. However,

the results did not reflect the same hierarchy as for prosocial behavior.

A look at the adjusted means for all four conditions showed that of the three conditions with prosocial training, only the mean of the PTPA condition was lower than that of the NTNA condition, but not significantly. Post-hoc joint univariate Scheffe analysis of covariance comparing pairs of adjusted means revealed that the mean (M = 0.74) for children in the NTPA condition was in fact significantly higher than the mean (M = 0.36) for children in the NTNA condition, t (122) = 2.04, p < .05.

Although it was hypothesized that the combined instructional strategy would be most effective in training children to be prosocial, in fact, it may have been most effective in training children to be less antisocial. Results showed that the adjusted mean (M = 0.21) for the PTPA condition was lower than in any other condition, and although not significantly lower than the mean for the NTNA condition (M = 0.36), significantly lower than that in the NTPA condition (M = 0.74), t (122) = 3.13, p < .01.

The combined adjusted mean of observed antisocial behavior for those children who did not view a prosocial content videotape (M = 0.54), was higher than that of children who did, at a level approaching significance (M = 0.29), F (1, 120) = 3.76, p < .06. Results suggest that the children who received enactive prosocial training without modeling support (prosocial video-type viewing), exhibited

high antisocial behavior. However, the inclusion of prosocial video-type viewing in the treatment, reduced the amount of antisocial behavior. In the conditions where there was no enactive prosocial training (PTNA and NTNA), the inclusion or absence of prosocial video-type viewing in the treatment had little effect on observed antisocial behavior.

Types of Antisocial Behavior Observed

A descriptive assessment of overall antisocial behavior for the entire sample shows that there was a decrease of approximately 35% from pre to posttesting in the number of total instances of antisocial behavior observed. Due to substantial missing data and the fact that certain operationally defined categories of antisocial behavior occurred rarely, it was not possible to report pre to posttest differences by category, per condition.

There were 72 instances of observed antisocial behavior during pretesting, and 47 during posttesting. Results suggest that the overall reduction in the number of instances of antisocial behavior was not specific to any one category. The proportion of each category to the overall sum remained relatively stable from pretest to posttest observations, as for prosocial behavior. There was a noticeable increase from pretest to posttest in the category of "Physical Aggression" (from 7% to 17%). However, perhaps it may be accounted for by taking into consideration the noticeable decrease in

antisocial behavior coded as "Other" (from 7% to 0). Table 14 reports total antisocial behavior observed, both before and after treatment, and by operationally defined category.

Table 14

Observed Antisocial Behavior by Category

Antisocial Behavior	Pretest		Posttest	
Total number of occurrences:	N=72	100%	N=47	100%
Grabbing	31	43%	19	41%
Verbal Aggression	10	14%	7	15%
Physical Aggression	5	7%	8	17%
Excluding	17	24%	10	21%
Other	5	7%	0	0%
Combination	4	5%	3	6%

Note. Percentages indicate the proportion of total observed occurrences which was attributed to each category.

Perspective-Taking Ability

A 2 (video-type) x 2 (activity-type) x 2 (sex) factorial analysis of covariance, using the pretest and age as covariates and the posttest perspective-taking ability score (the sum of perceptual, cognitive, and affective scores) as the dependent measure, revealed no significant interactions between factors, and no significant main effects.

The present results suggest that the treatments had no effect on perspective-taking ability, as measured in this study. Table 15 reports adjusted means, observed means and standard deviations for posttest perspective-taking ability.

Table 15

Posttest Perspective-Taking Ability: Adjusted Means, Observed Means and Standard Deviations

Condition	Adjusted Means	Observed Means	S.D.	N.
PTPA	12.50	12.21	2.91	42
PTNA	13.33	13.75	2.78	28
NTPA	12.24	11.88	3.47	25
NTNA	12.52	12.73	2.57	30
Total Sample		12.62	2.97	125

Note. Out of the total sample of 150, 25 subjects were omitted due to missing data.

Hypothesis Testing

The positive correlation between amount of prosocial behavior exhibited during free-play and level of perspective-taking ability was not confirmed. There seems to have been no correlation between the two measures at all, either during pretesting or posttesting. The correlation coefficient

between the two measures using pretest scores, r = -.12, was extremely low (negative in fact). The coefficient using posttest scores, r = .01, was also low. Because of this nonexistent correlation with observed prosocial behavior, the validity of this measure might be called into question.

The expected hierarchical relationship between the three types of perspective-taking ability (perceptual, cognitive, affective) was partly confirmed in that children scored highest on perceptual ability, followed by cognitive, and then affective ability. This was assessed only in a descriptive sense, without testing for statistical significance. Table 16 presents pretest and posttest results.

Table 16

Perceptual, Cognitive & Affective Perspective-Taking Ability

Perspective-taking	Pretest Scores (N = 140)		Posttest Scores (N = 131)	
	Mean	S.D.	Mean	S.D.
Perceptual Ability	5.02	1.34	4.94	1.40
Cognitive Ability	3.40	1.61	3.88	1.64
Affective Ability	3.22	1.43	3.73	1.44

Qualitative Observations

Since treatment effects were tested using a factorial design, if possible, the qualitative data was also looked at by factor sets as well as condition. Various aspects of the setting and history were described.

Setting Effects

Ecosystem

Generally, the physical setting for each daycare was variable, although most of the materials, toys and activity areas available were stable across settings. Five of the daycare settings occupied an entire building, with several different age-grouped classes housed within. The remaining three settings were part of a larger system (i.e., one floor of a community center, one floor of the YWCA, and a part of an elementary school). The amount of interaction with other children and/or adults afforded in each setting varied. Some were more insular, others more open to a larger, non-daycare system. Figure 14 shows settings within conditions in terms of insularity of environment.

Figure 14. *Insularity of daycare settings.*
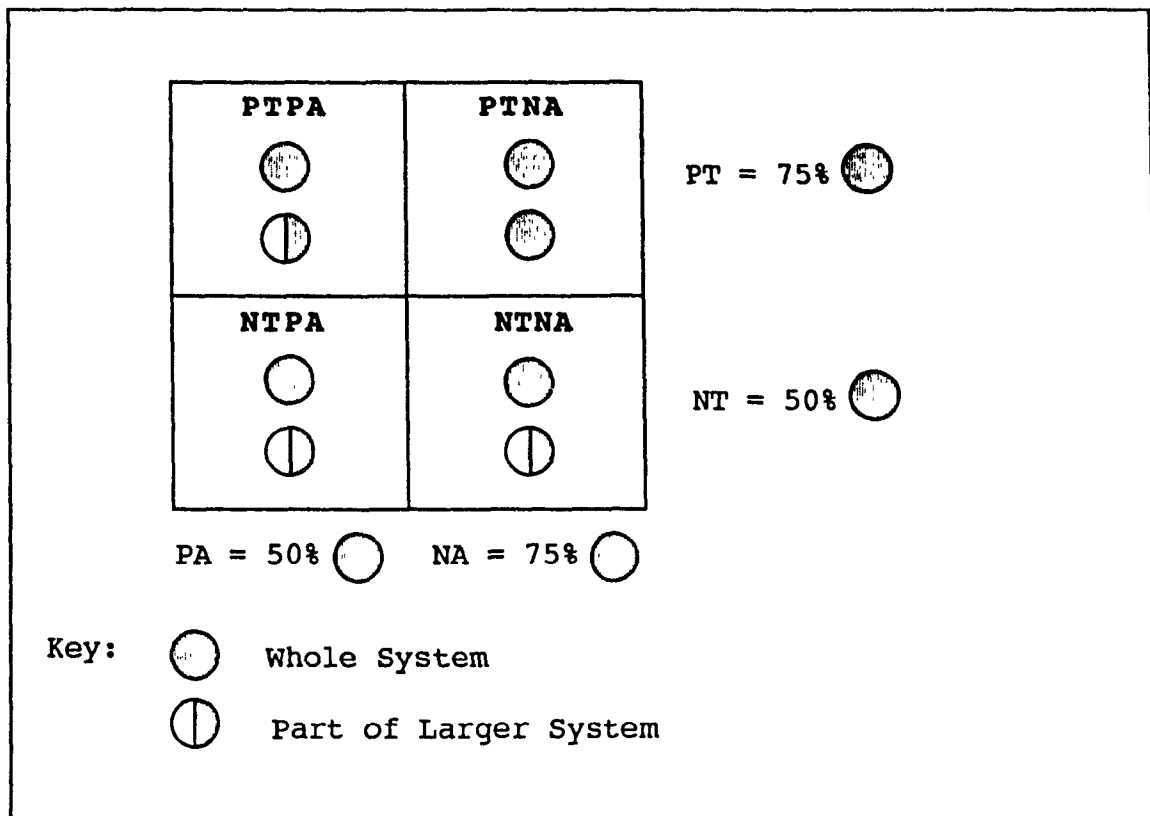
Class Size

Typically, there were 16 to 18 children per class, with two attending caregivers.

In two out of the eight settings, children were divided into even smaller classes of 7 and 12, with one attending caregiver. The two classes were combined into one larger class for a small portion of each day. Table 17 reports class size per daycare.

Table 17

Class Size by Setting Within Condition

	Class with 2 caregivers	Class with 1 caregiver
PTPA		
Setting 1	1 class of 16 1 class of 17	
Setting 2*		1 class of 12 1 class of 7
PTNA		
Setting 1	1 class of 16	
Setting 2	1 class of 17	
NTPA		
Setting 1		1 class of 9 1 class of 7
Setting 2	1 class of 16	
NTNA		
Setting 1	1 class of 16	
Setting 2	1 class of 17	
Total	115	+ 35 = 150

Note: *At this setting although there were officially 12 children assigned to one class, and 7 to the other, they were usually subdivided by activity into more equal groups with one attending caregiver per group.

Ethnic Diversity

There were few apparent differences between settings in terms of ethnic and racial diversity. Although no formal counts were taken, the children within each condition appeared to be from a diverse variety of discernable groups, with no one sector standing out as the majority.

Language Use

Since the treatment was in English, the percentage of English speaking children within each setting was of interest. This information was ascertained from the caregivers when they completed the social behavior ratings.

There were differences worth noting between the eight settings in terms of children's language use. The range was broad, from settings where all the children were English speaking, to settings where only half the children were. Table 18 presents the percentage of children who were primarily English speaking per setting within condition.

Language use was also looked at factorially, as reported in Figure 15. When collapsed in this way, language use differences were not as pronounced, with 84% English speaking children at the top of the range (in the neutral activity-type conditions), and 76% at the lower end (in the prosocial video-type conditions).

Table 18

<u>Percentage of English Language Use per Setting Within</u>

<u>Condition</u>

CONDITION	Setting 1	Setting 2	Average
PTPA	70 %	84 %	77 %
PTNA	88 %	71 %	80 %
NTPA	50 %	100 %	75 %
NTNA	75 %	100 %	88 %

<u>Figure 15</u>. *English language use by condition and factor.*

PTPA 77%	**PTNA** 80%	PT = 78.5%
NTPA 75%	**NTNA** 88%	NT = 81.5%
PA = 76%	NA = 84%	
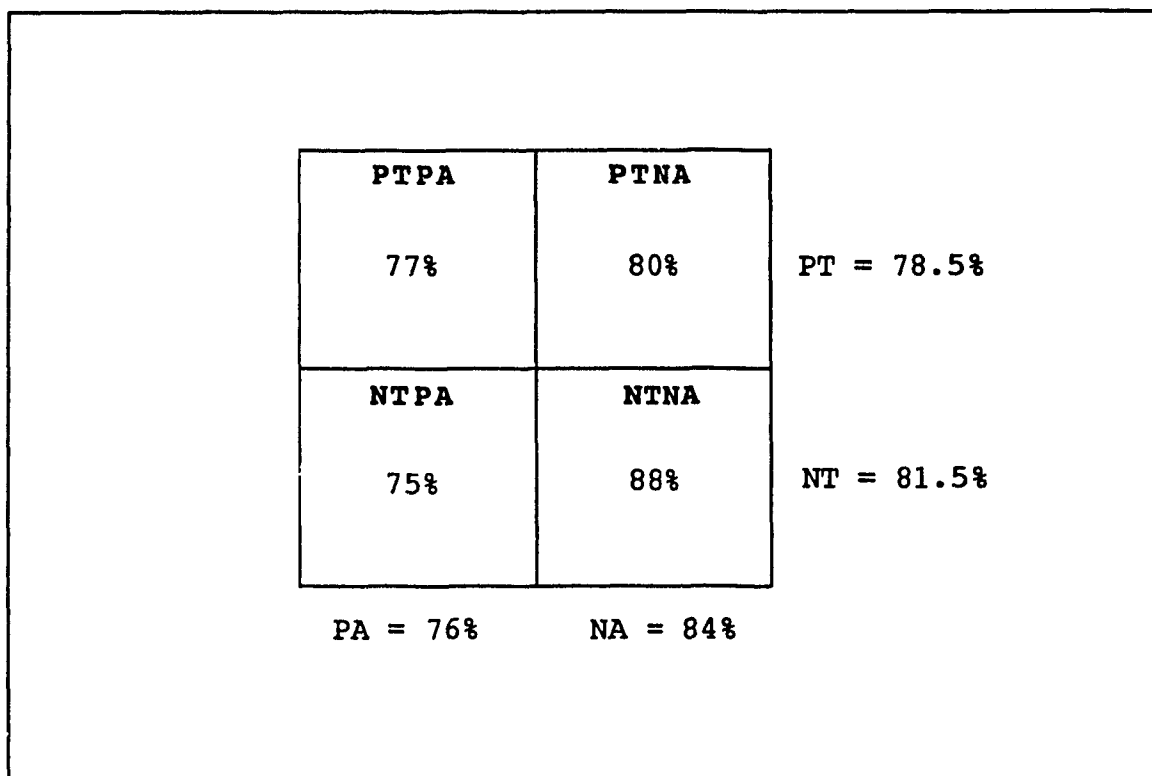
Daycare Quality

The quality of the eight settings was appraised in terms of staff-child interaction, child-child interaction, and quality of the physical environment. Table 19 presents the final results, by daycare. Figure 16 presents results by condition.

Table 19

Quality of Daycare Settings per Condition

	Staff-Child Interaction	Child-Child Interaction	Environment Quality
PTPA	96	100	62
Setting 1	100	100	41
Setting 2	92	100	82
PTNA	63	51	48
Setting 1	50	38	41
Setting 2	75	63	55
NTPA	75	66	38
Setting 1	92	63	32
Setting 2	58	69	43
NTNA	79	63	30
Setting 1	100	100	50
Setting 2	58	25	9

Note. The scores represent a percentage out of a 100.

Figure 16. *Quality of daycare settings rated by category.*

Quality of Staff-Child Interaction

PTPA	PTNA
96%	63%
NTPA	NTNA
75%	79%

PT = 79.5%

NT = 77%

PA = 85.5% NA = 71%

Quality of Child-Child Interaction

PTPA	PTNA
100%	51%
NTPA	NTNA
66%	63%

PT = 75.5%

NT = 64.5%

PA = 83%   NA = 57%

Quality of Environment

PTPA	PTNA
62%	48%
NTPA	NTNA
38%	30%

PT = 55%

NT = 34%

PA = 50%   NA = 39%

Results indicate that in terms of interaction between staff and children as well as among children, the settings in the prosocial activity-type conditions were rated highest, and those in the neutral activity-type conditions were rated lowest. On the quality of environment scale, the settings in the prosocial video-type conditions were rated highest, while those in the neutral video-type conditions were rated lowest.

Type of Free-Play

The way free-play was structured at the different settings varied a great deal. A descriptive assessment per setting within condition, based on the observers experience during pretesting and posttesting, was made. The following were noted:

1. The extent to which a range of play activities and materials was made available.

2. If variety was provided from day to day.

3. If fantasy play was allowed and accommodated.

4. If children could freely choose what they played with.

5. If children could control how long they played with a given thing or at a given area.

6. If children could freely move from activity or play area or if they have to ask permission.

7. If stable play partnerships were evident.

8. How the class was supervised.

9. If war play was allowed, and how it was controlled.

Results are presented in Appendix J.

From the descriptions, it is clear that there was variation from setting to setting in the way caregivers organized free-play. Some allowed a great deal of freedom, while others imposed substantial structure. Essentially, it appears that there was variability in terms of play during observation sessions being caregiver-controlled, or child-controlled. Figure 17 presents the types of free-play available per setting, per condition.

Figure 17. *Caregiver versus child control of free-play.*

PTPA	PTNA	
CHILD CHILD	CHILD CHILD	PT = 100%
NTPA	**NTNA**	
CAREGIVER CAREGIVER	CHILD CAREGIVER	NT = 25%

PA = 50%   NA = 75%

Note: Percentages indicate the amount of child-control of free-play.

Analyzing the eight settings according to type of control of free-play, shows that all of the settings (four) that viewed the prosocial content videotape as part of the treatment, afforded some degree of child-control during free-play. However, of the settings (four) that viewed the neutral (cognitive) content videotape, only one afforded some form of child-control. The rest engaged in more or less caregiver directed free-play.

Of the four settings that engaged in cooperative activities, free-play at two was caregiver-controlled, and child-controlled at the other two. Of the four settings that engaged in neutral (individualistic) activities, one setting provided caregiver-controlled free-play, while the remaining three provided some form of child-controlled free-play. When comparing the types of opportunities provided in the settings which were assigned to either cooperative or individualistic activity-type conditions, the picture seems a bit more balanced than when dividing the group along the video-type factor.

When analyzing the results by condition, the picture is not very balanced. Both settings in the NTPA condition offered only caregiver-controlled free-play. Both settings in the PTPA and the PTNA conditions offered only child-controlled free-play. These differences might have had an effect on the type of social behavior that was observed at the different settings and attributed to treatment.

Television Viewing

Patterns of television and video viewing at the eight
settings were variable. Five settings owned their own
television sets and reported occasional group viewing, while
three did not own television sets and provided no viewing at
all. Figure 18 presents an overview of television
availability per setting within condition.

Figure 18. *Patterns of television viewing.*

PTPA	PTNA	
YES	YES	PT = 100%
YES	YES	
NTPA	NTNA	
YES	NO	NT = 25%
NO	NO	

PA = 75%   NA = 50%

Note. Percentages indicate television availability.

All the children in the prosocial video-type conditions were accustomed to group viewing of television. However, only children in one out of the four settings in the neutral (cognitive) video-type condition had experienced group viewing of television. Thus, if a novelty effect were present, it might relate to the group viewing aspect for children in the cognitive video-type conditions. Such an effect would be nonexistent for children in the prosocial video-type conditions where group viewing was engaged in on an occasional basis. However, not having data pertaining to the content of what children in the prosocial video-type conditions were accustomed to viewing, a novelty effect for content would be hard to establish.

History

Implementation

Video: From the daily logs filled out by caregivers, it seems that the video portion of the program was presented consistently at all the settings.

Activities: The activities were sometimes not carried out according to the instructions provided. At the four settings that received the cooperative activity-type treatment, caregivers indicated that on one day of activities, the cooperative emphasis was changed to an

individualistic one. This was consistently done on the same treatment day, at all four settings - when children were asked to paint one large rainbow together. Perhaps there were habits of painting (each doing their own) which were hard to break, and children simply reverted to their individualistic habits regardless of the instructions given (each painting their own rainbow on a section of the paper provided).

At one of the four settings that received the individualistic-type activities (NTNA), caregivers altered the activities for five out of the eight days of treatment, removing the individualistic emphasis and making the activities cooperative. Due to this, making comparisons of results according to activity-type engaged in during treatment cannot be made with confidence. Furthermore, children at this setting were not accustomed to watching television. Thus, there may have been a simultaneous novelty effect for group viewing, potentially making the "cooperative" nature of viewing together a form of prosocial training.

Measurement

In two of the settings, one within the PTNA condition, and one within the NTPA, caregivers changed the way free-play was normally organized. For the six days of observations, child-control of free-play was offered where it did not exist before. At the setting in the NTPA condition, caregivers also

changed the group size for part of the observation time, increasing it by combining two classes. These changes may have affected social behavior in that there may have been a novelty effect for the type of play opportunities afforded.

Response

Caregivers stated that the overall response of children to the program was positive. It is worth noting that at one of the settings in the PTPA condition, response was not as favorable. Caregivers stated that children were restless during the program, and often did not participate. However, since caregivers had used the normal outdoor play time to implement the program for the eight days of treatment, it is possible that this may have been due to the fact that children missed their usual outdoor play. Furthermore, children at this setting were accustomed to regular group viewing of television, and thus may not have been as interested in watching as children in settings which were not used to it.

Summary of Results

Prosocial Behavior

A significant main effect for video-type cn prosocial behavior as observed during free-play was found. Children in the conditions that viewed a prosocial content videotape showed significantly more prosocial behavior after treatment than children who viewed a neutral (cognitive) videotape. Sex was not a significant factor in the design.

Of the three conditions with some form of prosocial training, only the children in the condition with prosocial training provided in the observational component of the program exhibited more prosocial behavior during free-play than the children who did not receive any prosocial training at all. The combined instructional strategy program was not more effective in training children to be prosocial than the one instructional strategy programs. The children who received prosocial training in the observational component of the treatment, exhibited significantly more prosocial behavior than children who received prosocial training in the enactive component of the program.

There was an overall increase of approximately 33% in the number of coded occurrences of prosocial behavior observed from pretesting to posttesting. The proportion of each category to the sum remained more or less the same,

suggesting the treatments did not target any one specific type of prosocial behavior.

Antisocial Behavior

Results revealed a significant interaction for video-type X activity-type on antisocial behavior as observed during free-play. Sex was not a significant factor.

Children who received enactive prosocial training, without modeling support (prosocial video-type viewing) exhibited high antisocial behavior. However, the inclusion of prosocial video-type viewing in the treatment, reduced the amount of antisocial behavior. In the conditions where there was no enactive prosocial training, the inclusion or absence of prosocial video-type viewing in the treatment had little effect on observed antisocial behavior.

There was an overall decrease of approximately 35% in the number of coded occurrences of antisocial behavior observed from pretesting to posttesting. Results suggest that the decrease was not specific to any one category.

Perspective-Taking Ability

Results suggest that the treatments had no effect on perspective-taking ability, as measured in this study. Sex was not a significant factor in the results.

The positive correlation expected between amount of prosocial behavior exhibited during free-play and level of perspective-taking ability was not confirmed.

The expected hierarchical relationship between the three types of perspective-taking ability (perceptual, cognitive, affective) was partly confirmed in that children scored highest on perceptual ability, followed by cognitive, and then affective ability.

Measures Dropped from Analysis

Data from the *Preschool Social Behavior Questionnaire* was highly inconsistent across settings and conditions, and was dropped from the analysis.

There was very little donating behavior reported using the situational test of altruism. This measure was dropped from the analysis as well.

Qualitative Observations

The eight settings showed differences when compared across several factors pertaining either to setting, or history (during implementation or measurement):

Setting

Insularity of environment: Settings in the PTNA condition were most insular, affording enhanced interactions with familiar peers. Settings in the prosocial video-type and neutral activity-type conditions were more insular than those in the neutral video-type and prosocial activity-type conditions.

Class size: One setting in the NTPA condition was different than any other setting; instead of over 16 children and two attending caregivers per class, it had only 8 children, with one attending caregiver.

English language: While most settings had classes which were at least 70% English speaking, one setting in the NTPA condition had a class that was only 50% English speaking.

Daycare quality: Staff-child and child-child interaction was rated most favorably at the settings in the PTPA condition, and least favorably at the settings in the PTNA condition. Environment quality was also rated most favorably at the settings in the PTPA condition, but least favorably at the settings in the NTNA condition. When analyzed by factor, settings in the prosocial activity-type conditions were rated highest in terms of staff-child and child-child interaction, while those in neutral activity-type conditions were rated lowest. For environment quality, those in the prosocial video-type conditions were rated highest, and those in the neutral video-type conditions, lowest.

Type of free-play: All settings in the prosocial video-type conditions afforded some child-control in free-play. Only one out of the four settings in the neutral video-type conditions afforded any child-control. Of the four settings in the prosocial activity-type conditions, half offered caregiver-controlled free-play, the other child-controlled free-play. Of the four settings in the neutral activity-type conditions, three offered child-controlled free-play.

Television viewing: All four settings in the prosocial video-type conditions owned television sets and regularly scheduled group viewing. Only one setting out of the four in the neutral video-type condition owned a television set; for the other three, group viewing of television was novel.

History

Implementation: At all the settings in the prosocial activity-type conditions, one day of treatment was altered making it individualistic (neutral) rather than cooperative. At one of the settings in the neutral activity-type conditions (NTNA), 5 out of the 8 days of treatment were altered, making the treatment predominantly cooperative rather than neutral (individualistic).

Measurement: More freedom and child-control than usual was allowed during free-play observation sessions in two settings - one in the PTNA, and one in the NTPA condition. At the setting in the NTPA condition, class size during observations of free-play was increased as well, creating a novel class atmosphere, and more play partner opportunities.

Response: At one of the settings in the PTPA condition, the treatment was scheduled at a time normally allotted for outdoor play. It may have affected children's response to the program in that they were described as being either restless or disinterested for four out of the eight days of treatment.

DISCUSSION

Assessment of Intervention Approach

Benefit to the Learner

The results obtained from this study tend to support the use of instructional programs based on Social Learning Theory (Bandura, 1986) as a means of training positive social skills among children (age 3-5) in the daycare setting. Results suggest that the modelling component of the program, a videotape of *Sesame Street* segments containing exclusively prosocial content, may have had an effect on the prosocial behavior exhibited by children during free-play, in that children who viewed the prosocial content program exhibited significantly more prosocial behavior during posttesting than children who viewed the neutral (cognitive) content program. The prosocial training strategies based on Cognitive-Developmental Stage Theory that were tested in this study, involving the provision of opportunities to enact prosocial behavior, did not have a significant impact on children's prosocial behavior during free-play.

Although the effect of the programs on antisocial behavior was not the focus of the study, it was analyzed nonetheless. No main effect for viewing prosocial content as compared with cognitive content *Sesame Street* emerged. However, it was found that children who were exposed to

prosocial enactive training, without prosocial modelling support, were significantly more antisocial during posttest observations of free-play than those that received both types of prosocial training.

The results obtained cannot be analyzed without taking the qualitative observations into account. In fact, there are several potentially confounding factors which might explain why the observational component of the program appears to have impacted on prosocial behavior, regardless of whether it was followed by enactive prosocial training, and why the enactive component apparently impacted on antisocial behavior only when not preceded by the observational training component.

If we analyze the settings in the prosocial video viewing conditions as compared with those in the neutral video viewing conditions, certain discernable differences emerge. The settings in the conditions that viewed the prosocial content videotape were more insular (housed in their own separate buildings), than those in the control settings. Thus, what behaviors were modelled during viewing, potentially had more opportunity to be practised with similar-aged familiar peers throughout the day, than at the settings that were part of a larger ecosystem which included unfamiliar adults and/or elementary school-aged children.

Another difference which emerged was in the type of free-play offered at the various daycares. More child-control was allowed during free-play at the settings in the prosocial

video-type conditions, as compared with the neutral video-type conditions where free-play was predominantly caregiver controlled. It is possible that there is enhanced opportunity for children to engage in spontaneous prosocial behavior in settings which allow extensive freedom during play. A similar tentative conclusion was also reached in a study by Friedrich and Stein (1975b) where it was found that "the atmosphere and procedures in low structure classrooms were more conducive to the acquisition of prosocial behavior ..." than that in high structure classrooms. Furthermore, at one of the settings in the prosocial video-type conditions, the child-control was only allowed due to the presence of the research team. Although the same novel freedom was allowed both during pretest and posttest observations, it is possible that there may have been an escalation in exploratory behavior from day to day, once children came to fully realize the new play possibilities.

Another possible contributing factor was daycare quality. The settings which were in the prosocial video-type conditions were rated slightly higher in terms of the quality of child-child interaction as well as physical environment, than those in the neutral viewing conditions. Thus, the existing peer atmosphere and physical environment may have further enhanced the opportunities for practising the prosocial behaviors modelled. However, such conclusions are highly tentative in that the differences in terms of quality rating were minimal (11 and 21 percent), and not along the

same lines of differentiation as in studies which have looked at such effects (for instance, Vandell, Henderson & Wilson, 1988, where such characteristics as adult-child ratios, staff turnover and teacher training were comparatively analyzed). The observations used for the present assessment were merely descriptive observations of staff-child and child-child interactions, and the physical setting itself.

All of the above considerations notwithstanding, those children who were exposed to prosocial content *Sesame Street* segments for eight days, were significantly more prosocial during free-play than children who were not. These results are encouraging, in that previous research tends to suggest that the transfer of antisocial behaviors is more easily achieved as a result of observational learning, than the transfer of prosocial behaviors. While aggressive modelling can lead to both specific imitation and generalization, regardless of personality or demographic differences in the viewers (Bandura, Ross & Ross, 1963; Bandura, 1986; Murray, Rubenstein & Comstock, 1972), results with prosocial modelling are often inconclusive (Friedrich & Stein, 1975b). Although prosocial modelling can lead to specific imitation (Coates, Pusser & Goodman, 1976; Paulson; 1974; Sprafkin, Liebert & Wicks-Poulos, 1975), it often works selectively for a segment of the test population (Friedrich & Stein, 1973). Furthermore, the behavior modelled sometimes does not generalize to new situations (Leifer, 1975; Paulson, 1974). Within the framework of this study, transfer of prosocial

behaviors modelled was nonspecific and generalized to everyday classroom social behavior.

These results expand on previous research done using *Sesame Street* for positive social skills training. It was found that the use of the mosaic format, but with exclusively socially-oriented content, can lead to generalized transfer of cooperative type behavior, even after only eight days of viewing. A study by Paulson (1974), where generalizability was not attained, included viewing over an entire season, but of material which only dealt with socially-oriented content for approximately half of each of the one-hour programs seen.

Although it was expected that the provision of enactive support would significantly enhance the transfer of modelled prosocial behavior, as in a study by Friedrich and Stein (1975a) where verbal-labelling and role-playing followed viewing, the results obtained in the present study did not confirm this. In fact, the group that was exposed to models of prosocial behavior without subsequent enactive support, exhibited more prosocial behavior during posttesting than any other group.

Results obtained by Ahammer and Murray (1979), which found that for facilitating altruism and other forms of prosocial behavior (helping, sharing), a variety of role-playing and enactive forms of training were significantly more effective than an observational training condition (TV viewing), were not confirmed. However, this may simply be a function of the treatments themselves - in that the role-

playing training methods tested by Ahammer and Murray were substantially more involved than the ones tested here. On the other hand, the video material used in the present study, was substantially more tailored than that used by Ahammer and Murray (where broadcast shows such as *Lassie* were used, with no editing or design intervention).

With regards to the possible impact of the enactive prosocial training component on antisocial behavior, a closer look at the qualitative results suggests that conclusions cannot be made with a high degree ⌐f confidence either. There were several confounding implementation inconsistencies, events, and setting characteristics which may have contributed to what emerged statistically.

From the implementation records, it is clear that at one out of the four settings which were randomly assigned to the neutral, individualistic conditions, ⌐aregivers strayed from the instructions given and changed the program, rendering it a form of prosocial training. Thus, any factorial analyses have to be interpreted with caution.

With respect to the significant difference in the amount of antisocial behavior observed between the condition that received both types of prosocial training, and the one which received only the enactive training, two setting effects may have come into play. At one of the two settings in the condition that received only the enactive prosocial training component, only 50% of children were English speaking (the second lowest percentage at another setting was 70%). Such a

situation could easily affect the quality of child-child interactions found in the classroom under normal circumstances, let alone in a situation where children are purposely put into an interactive mode. The interactivity encouraged as part of the program may have reduced post-treatment inhibitions towards social and play interactions between different language speaking children, but not reduced the types of conflicts which would be likely to occur in such a situation.

In the other setting which had been randomly assigned to the condition which only received enactive prosocial training, class size was temporarily increased during observations, creating a novel class atmosphere which could have influenced the type of social behavior exhibited. In fact, it is possible that the enhanced opportunities for social interaction which were afforded in the new class size may have caused an increase in overall social behavior, of which antisocial behavior is merely a part. Furthermore, such behaviors as excluding and grabbing (which were coded) might easily increase if children are in a group of relatively unfamiliar peers, other than those they would normally spend their time with.

It should also be pointed out that when comparing the settings in these two conditions, those in the condition that received only the enactive training, were consistently rated lower in terms of quality of child-child and staff-child interactions, as well as characteristics of the physical

environment, than those in the condition that received both forms of prosocial training (a difference of between 21 and 34 percent).

In addition to this, free-play in the settings that received both forms of training was child-controlled; the settings which were exposed only to enactive training, offered free-play which was caregiver-controlled. Perhaps children in the settings where caregivers were constantly ready to intervene and control play behavior did not have as much opportunity to negotiate their needs and conflicts with peers on their own, and as a result, did not have the opportunity to practise such skills and gain confidence in their own abilities. Meanwhile, where much child-control of play was afforded, much practise and skill in resolving potential play conflicts might have already been gained, resulting in less antisocial interactions. The difference in type of freeplay is important, even if one can only speculate as to its possible effects on children's antisocial behavior.

The qualitative observations notwithstanding, it is worth noting that although the combined use of both instructional strategies did not impact on prosocial behavior as expected, it may have impacted on antisocial behavior instead. Observed posttest antisocial behavior was lowest among children who received the combined form of prosocial training.

Benefit to the Learning System

Overall caregiver response to the videotape material, the activities, and the participation of their class was positive. Caregivers indicated that children in their classes enjoyed the programs, and were beginning to show signs of actually looking forward to the new "viewing followed by talking and playing" routine that was being established. It became a time to deal with certain social issues, together.

It did not appear that the program was obtrusive in that once a schedule was chosen, there was little difficulty in integrating the routine into the day to day activities present at the daycare settings. This held for all but one of the eight settings, where by scheduling the program at a time when children would normally have been going outside to play, caregivers were faced with restless, often uninterested children during program implementation.

Certain caregivers indicated that children in their class were beginning to use the prosocial terminology (cooperate, share, take turns, help ...) spontaneously during play. In fact, some went so far as to say that on occasion, parents came back with comments indicating that the children were beginning to talk about and practise the concepts presented during the program at home as well. Although such effects were not formally measured, they are encouraging, nonetheless. A spill-over of program effects beyond the boundaries of the host learning system where the intervention

was introduced, are surely a desired outcome, which was apparently initiated at least in a limited sense.

Overall results suggest that the introduction of more social skills training to the daycare learning system is possible: both teacher and student response was favorable. However, generating enough material for use is another problem. One of the teachers from a setting where the prosocial content videotape was viewed, indicated that she would have liked to obtain a copy of the tape for future use. However, at this stage, this was not possible since the rights obtained from the Children's Television Workshop were for research only. Furthermore, it is probable that after repeated viewing, the twenty eight segments which were part of the videotape would have lost their initial appeal. Nevertheless, perhaps a need exists for the production of fresh video material for use in the daycare learning system as part of its everyday routine.

Aside from material for viewing, there is certainly room for more activities and games which stress group oriented, rather than competitive values, and deal with socio-cultural aside from cognitive content. Although, due to implementation inconsistencies, it is difficult to interpret possible effects of the activities used in this study on prosocial behavior, from teacher response, it is quite probable that some form of positive outcome was achieved. Teachers seemed willing to enhance the cooperative aspect of the programs and activities they conduct as part of their classroom routine:

the availability of guidelines would certainly be beneficial towards this goal.

The direction to take seems to be to make more material available for caregivers to sample and adopt at their convenience, and in response to their personal taste and interest. Radical revision of existing programs to focus entirely on social skills, as has already been found to be successful in terms of reducing aggressive behavior (Finkelstein, 1982), is not the only option. A "piecemeal module replacement" approach (Boyd, Mulema & Zielinska, 1990) can also be adopted. Although Boyd et al. applied this approach to updating existing electrotechnology curriculum and equipment at the college level, in principle, it can be applied in this context as well. Ideally, the new module, curricular program component or equipment (even if introduced for a limited time only), will present the opportunity for a certain shift in emphasis, or novel way of approaching certain problems. In this case, a sensitization to certain social aspects of peer interaction within the daycare might emerge - in the same way as an interest in using new simulation technology might be aroused in the college context mentioned. If a positive effect on the learner is perceived, it may encourage teachers to continue applying the same *principles* in their teaching, even if the actual teaching aids are removed.

It is interesting that recent developments at the Children's Television Workshop include finding means of

reaching the community in ways other than by broadcasting alone. In fact, certain community outreach programs have been launched. Of particular interest are those which involve the design and distribution of age-appropriate activities and materials for the daycare setting. For instance, an effort is being made "to combine the viewing of *Sesame Street* with reading and other activities as a way of helping child-care providers enhance their daily programs" (p. 49, Davis, Ibanez-Friedman & Martin, 1990). The project calls for children to view *Sesame Street* 5 days a week, twice a day for thirty minutes, followed by activities which are meant to reinforce the material seen. In a sense the structure of the program is similar to the one tested in this study, except that the content is cognitive rather than socially oriented. Also, as in this project, an effort is being made to accommodate the existing schedule and time availability constraints present at daycares, as well as differences in teacher motivation towards the program, and skill in implementing it.

However, even in such a project, it is truly unfortunate that once again, the social development of children is being ignored in lieu of their cognitive development. As Elkind (1987) points out:

> Early childhood is a very important period of life. It
> is a period when children learn an enormous amount about
> the everyday world. It is also the time during which
> young children acquire lifelong attitudes towards

themselves, towards others, and towards learning. But it is not the time for formal academic instruction. To appreciate this truth, we need to see the early years for what they are and not through the lenses of social, political, and personal dynamics that provide a distorted image of early-childhood competence. (p. 71)

It is a pity indeed, that this powerful formative time is being crammed with reading and counting instruction, which will be acquired anyway at a later stage, while giving little attention to the nurturing of self-esteem, the encouragement of collaborative endeavor, and to the enhancement of understanding of oneself, others, and the world at large.

Competition and stress will be lifelong companions - not much can be done about that. But why not fortify the next generation with better coping attitudes and strategies, and better means of dealing with conflict and the demands of an increasingly interdependent world. It would seem that once the cognitive material that many preschool programs are so bent on teaching, the earlier the better, is mastered, it is only the need for these same interactive social skills which will surface again. Perhaps by not encouraging children to tackle the acquisition of such social skills in a fundamental way at a formative young age, we are limiting the possibilities of what society can achieve in the future - as a collective force capable of working together in a harmonious way.

In conclusion, one could argue that in terms of diffusibility of social skills training programs and methods, perhaps the biggest challenge is not in getting the acceptance of caregivers and children. Perhaps the art lies in trying to get the approval of parents, politicians and others who might have a personal stake in the matter, and impose their own performance expectations on the next generation.

Present Limitations and Future Research Directions

Implementation

This study can be viewed only as an exploratory exercise, meant to satisfy two separate but simultaneous lines of questioning. On the one hand, an attempt was made to analyze the effects of a particular program design on the learner; at the same time, an analysis of the feasibility and benefit of such an intervention approach for the learning system itself was undertaken. And in trying to accommodate both directions for exploration, certain research design sacrifices were made. The first and foremost, to allow for teacher program implementation, contributed to a confounding of treatment effects. Aside from teacher differences which were immediately present due to the research design, the problems of inconsistency in implementation as well as

outright deviation from the instructions provided were discovered as well.

Therefore, any design impact results and recommendations based on this study can only be tentative. Directions for further study of design impact can be outlined, and preliminary steps towards the actual design of reproducible materials and working towards their acceptance, installation and diffusion within the learning system can be initiated. However, only limited inferences with regards to the success or failure of theoretical perspectives and instructional strategies as applied to the design of prosocial training for preschool children can be made.

Measurement

With respect to the analysis of intervention design impact on social behavior, a multiple means of measurement approach was attempted. It was hoped that by finding a relationship between different measures of social behavior and related skills, the validity of results would be enhanced. However, the expected relationships between measures were not confirmed. Furthermore, there were problems with several of the measures adopted for the study. Thus, most of the conclusions that were reached stand on the apparent strength of direct observations of social behavior during free-play. Although inter-rater reliability was

acceptable and high, no other support for the reliability of the observational scheme was obtained.

The fact that measurement of social behavior is an endless challenge was confirmed. Looking at the types of problems found, it would seem that multiple measurement was the only practical option, in that it was not possible to predict which measures would be unusable. In a sense one can almost expect data from most measures of social behavior to be approximate and partial at best, or highly problematic and unusable at worst. However, even with a multiple measurement method research design, and even if more than one measure produces usable data, there is no guarantee that any relationships between the measures will be found, once again pointing to the partial context-bound nature of results.

In the present study, there was no relationship found between perspective-taking ability and prosocial behavior. Although most of the answers children gave during the test of perceptual, cognitive and affective perspective-taking ability were codeable, perhaps their validity comes into question in that one-word answers were acceptable, and often codeable as correct. However, if prompted further (which was not part of the standardized protocol of questioning) it is probable that children's partial, often incomplete understanding of another's perspective might have been revealed. It is also possible that children did not really apply themselves to the test as seriously as they could have, due to the fact that the altruism test was scheduled

scheduled immediately after. As the word spread that "the sticker game" was being played, children wanted to play in order to get the apparent reward, and maybe just wanted to get it over with, in order to get the stickers faster. Age might have been a factor as well; some of the children might have been too young to understand the task.

Caregiver ratings of social behavior, which were meant to provide a pretest validation of sorts for the direct free-play observations, were not usable due to inconsistencies found. Several possible explanations for inconsistencies come to mind, aside from the fact that different teachers at different settings were rating different children. For one, since the length of time that caregivers knew the children they were coding varied a great deal (from a few months to several years), the qualifications of some of the caregivers in rating the children comes into question. Although several caregivers declined to rate children if they did not know them very long, this was not always the case. Furthermore, caregiver disciplinary-compliance expectations *vis a vis* acceptable behavior within their classroom may have been highly variable from setting to setting. Such variation in expectations may have affected ratings of children's social behavior, in that the standard against which they were compared was unstable. Finally, the measures upon which the *Preschool Social Behavior Questionnaire* was based were designed in the 1960s and 70s. They had previously been used within relatively culturally homogeneous settings. At

present, taking into consideration the heterogeneous composition of the daycare classes, other biases and factors may have been at work which would taint the objectivity of results. Not only the culture of the children, but the culture of the rater may need to be taken into consideration when using caregiver ratings between settings.

Even the observational scheme itself had certain limitations. For instance, when a child would do something prosocial in an antisocial context, the coding scheme with its positive-negative distinction, could not accommodate it (as for example if a child would grab a toy from one child in order to give it to a distressed friend). In the context of the study, where positive or negative intent had to be established prior to coding, such an event would escape classification.

It is very difficult to reduce something as complex as social behavior into a few categories. It seems that a lot might be lost in between. The prosocial and antisocial behavior as coded within this study is only a partial, often incomplete and potentially inaccurate portrait of what actually occurred, based on a personal judgment by the observer of what the intent behind the action was. Such difficulties in measuring and operationally defining social behavior cannot be ignored, and must be taken into account when making conclusions related to potential program effects.

It would have been interesting to look at the relationship between prosocial and antisocial behavior, to

see if the proportion of the one to the other was somehow affected as a result of the different types of treatment. An attempt to calculate such a ratio was made. However, due to the numerical characteristics of the data itself, which resulted in some statistical limitations, it was not possible to generate a score. Analyzing the potential change in the proportion of prosocial behavior, or even antisocial behavior, to total social behavior exhibited as a result of treatment would certainly be an interesting approach to take for future studies. Perhaps this is the optimum approach to explore, in that social behavior is a continuum, and neither extreme can or should be eliminated. It is merely nourishing a more wholesome balance between the altruistic and egotistical tendencies which is aimed at with the design of prosocial training.

Taking into consideration the results obtained from the qualitative observations of the field test settings, further calls into question any conclusions drawn with regards to program effects. Perhaps in field research, where the extraneous variables can carry equal weight as the treatment variables themselves, the best one can hope for is to reveal relationships between factors, instead of trying to uncover hypothesis related causal links.

Based on the present study, the use of both quantitative and qualitative data seems to be a prerequisite for adequate evaluation of the effects of programs aimed at affecting social behavior. Perhaps broad, but systematic, guidelines

for describing field test settings should be designed and evaluated for future use. It is often not possible to predict which extraneous variable might make the difference, so to measure or describe only the most obvious is not enough. One should possibly take note of many setting characteristics, not even trying to predict which may be of paramount importance, and then map the eventual overlapping of influences once the quantitative results are analyzed. Therefore, perhaps measures of both setting and subject characteristics must be undertaken, and the relationship between the two scrutinized. Another strategy might be to assess many setting characteristics beforehand, and then assign settings to conditions matching the setting characteristics assessed, as one would match subject characteristics.

Temporal Scope

The temporal scope of the treatment was brief. Towards teasing out the differential effects on prosocial and antisocial behavior of a program which combined two instructional strategies, a longer time span might have been beneficial. However, within the exploratory context of this study, which aimed at trying to gauge if the learning system in question would be open to such a "style" of intervention, and whether it was feasible, only a short term intervention was possible.

Thus, in terms of treatment effects, it is not possible to gauge what the long term effects of the social skills training intervention design tested might be. For instance, perhaps there was merely a short term rise in observable prosocial behavior resulting from the observational training component of the program. However, it is beyond the scope of the study to examine if such an effect would taper off if children were exposed to a daily diet of prosocial modelling.

In terms of the possible impact of interactive cooperative activities on the incidence of observed antisocial behavior, it is equally possible that this was merely a side effect of a general rise in sociability, and that it would taper off in time. Perhaps the enactive prosocial training component of the program would impact on prosocial behavior but only after repeated, long term exposure which would allow for an internalized understanding of the underlying principles. This may be particularly true taking into consideration that within the context of this study, the enactive prosocial training treatment was sometimes coupled with a novel classroom size and atmosphere. Furthermore, in attempting to train social skills in an enactive way, an initial volatile period might be expected, where the behaviors being taught are attempted, practiced, and experimented with, children thereby exploring the desirable as well as undesirable consequences of action choices taken.

To more fully understand the interplay of the two instructional strategies tested, and to look at their potential effect on young children's prosocial and antisocial behavior from a more theoretical perspective, a longer treatment is recommended. Without it, only limited conclusions can be drawn.

Social Skills Training and Educational Television

Although not within the scope of this study, further research aimed at studying optimum production formats and story sequence guidelines for educational television aimed at heightening the social skills and social awareness of young children, seems warranted. The mosaic format used by *Sesame Street*, when used to teach cognitive skills, had been effective - even if the content was not exclusively cognitive. However, when the same type of format was used in attempts to facilitate the transfer of cooperative and socially-valued types of behavior, the objectives were not reached to the same extent (Leifer, 1975; Paulson, 1974). In the present study, when the content was exclusively socially-oriented, the format was effective. It would be interesting to compare directly the mosaic format, as used within this study, with a more conventional story structure approach, such as used in *Mr. Roger's Neighborhood*. When the effects of these two shows on social behavior had previously been

compared (Coates, Pusser & Goodman, 1976), content was compared instead of format; a content analysis revealed that the *Sesame Street* segments modelled both positive reinforcement and punishment behaviors, whereas the *Mr. Roger's Neighborhood* material modelled exclusively positive reinforcement behaviors. The effects of both shows on social behavior were highly related to the content, as examined in the content analysis.

In a sense, using a mosaic type format is entirely different than using a narrative style of presentation. One is continuous, unfolding like a story in real time, with whatever social behavior being presented grounded in real time and experience (and usually only one or two examples). The mosaic approach, on the other hand, is more cognitive in a sense; it presents many examples of the same type of behavior (allowing for analogical-type comparisons), and multiple presentations not bound by real time constraints and story limitations.

However, the narrative format offers the potential for being more "experiential" - allowing for emotional engagement and vicarious arousal. The mosaic approach, offering only short segments, would not tend to engage vicarious emotional involvement, presenting a more analytical type of experience. There may be developmental viewer characteristics which make one format more effective for young viewers, than the other. It is equally possible that learning styles and preferences may also have an influence, even at a young age, making the

effectiveness of the presentation model dependent on viewer preferences and characteristics aside from age.

Conclusion

An educational technologist can tackle an instructional design problem in many ways. Perhaps at the extremes of the range of possibilities are: (a) a global systemic approach - problems are analyzed and explored in their environmental context, with the objective of gaining experience to be shared and used towards the eventual production of practicable and diffusible products or processes, and (b) a discrete focused approach - a single problem is addressed with the objective of immediate production of a tangible practicable and diffusible result.

The results of the exploratory systemic analysis undertaken in this thesis can potentially be of benefit to: (a) educators concerned with addressing problems originating at the socio/environmental level; (b) designers of programs aimed at enhancing the social development of children; and (c) indirectly, children. The next step in the process started, although beyond the scope of this thesis, would be the design and production of specific modules or resources, which are installed and distributed at real settings, and do what they are designed to do - enhance social skills.

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
Prosocial Video-Type Daily Viewing

VIEWING   DAY 1
Emphasis: Helping & Cooperation

Legend:
- ▨ production technique with verbal-labelling
- ▥ no verbal labelling

TIME	SECOND VIEWING	HELPING	SHARING	TURN-TAKING	COOPERATION	LIVE-ACTION	PIXILATION	ANIMATION	MUPPETS	MUPPETS + PEOPLE	SEGMENT SYNOPSIS
0:00 – 1:00								▨			THE LION & THE MOUSE: A lion does not eat a mouse. The mouse later "helps" the lion.
1:00 – 3:00									▨		RUBY AND THE COUNT: Ruby says she will "help" the Count count raindrops while he goes to eat lunch. ... to be continued below ...
3:00 – 4:00			▥					▨			HARMONY: A cat helps other cats learn to "cooperate" by playing music together in harmony.
4:00 – 6:00									▨		RUBY AND THE COUNT: The Count finds his raindrops collected in buckets. The "help" he got was not exactly what he had in mind, but he is glad he can count the buckets.
6:00 – 8:00			▥	▥						▨	SCRATCH MY BACK: A musical number about cooperating to help relieve an itch by taking turns to scratch each other's backs.
8:00 – 10:30			▥				▨	▨			TINY LITTLE SUPER GUY TAKING TURNS: Tiny Little Super Guy helps a group of kids learn about "taking turns" and "cooperating" when sharing the use of a swing.
10:30 – 12:00											

TOTAL VIEWING TIME: 10:38

VIEWING DAY 2
Emphasis: Cooperation

Legend:
- production technique with verbal-labelling
- no verbal labelling

TIME	SECOND VIEWING	CONTENT (HELPING, SHARING, TURN-TAKING, COOPERATION)	TECHNIQUE (LIVE-ACTION, PIXILATION, ANIMATION, MUPPETS, MUPPETS + PEOPLE, PEOPLE)	SEGMENT SYNOPSIS
0:00 0:30 1:00		SHARING (no verbal labelling)	MUPPETS	NEEDLE AND THREAD: The king's trousers rip. A needle and thread must learn to "cooperate" to help mend them.
1:30 2:00 2:30 3:00 3:30 4:00		TURN-TAKING, COOPERATION (no verbal labelling)	MUPPETS	THE KING'S PICNIC: A king decides to have a picnic. He tells his people what he wants them to bring to eat. They all bring the same thing. Finally, the people learn to cooperate by planning what food each should bring to share so that their menu is varied.
4:30 5:00		COOPERATION (no verbal labelling)	PIXILATION, ANIMATION (production technique with verbal-labelling)	PAINTING: Kids learn to "cooperate" by sharing materials so that each can paint.
5:30 6:00		COOPERATION (no verbal labelling)	ANIMATION	DAISY: Petals cooperate to form a daisy.
6:30 7:00 7:30 8:00 8:30 9:00 9:30 10:00		COOPERATION (no verbal labelling)	ANIMATION	OPERATION PLAYGROUND: A group of kids designs a new playground. They mobilize their neighborhood to "help" build it.
10:30 11:00			MUPPETS	CAR WASH: A group of animals "cooperate" to wash a car then take a ride together.
11:30 12:00				

TOTAL VIEWING TIME 11:34

VIEWING   DAY 3

Emphasis: Helping,Turn-taking & Cooperation

Legend:
- production technique
- with verbal-labelling
- no verbal labelling

TIME	SECOND VIEWING	HELPING	SHARING	TURN-TAKING	COOPERATION	LIVE-ACTION	PIXILATION	ANIMATION	MUPPETS	MUPPETS + PEOPLE	SEGMENT SYNOPSIS
0:00 – 2:30										▧	COOPERATION: A musical number about "cooperation" in tending a garden together.
2:30 – 3:30				▨	▨				▧		RIGHT OF WAY: Mountain goats learn to cooperate by taking turns passing each other on a narrow path.
4:00 – 5:30										▧	ELMO HELPS KERMIT: Elmo wants to "help" Kermit. He ends up getting in Kermit's way, and "helping" accomplish something which was not intended.
6:00 – 7:00		▨			▨	▧	▧	▧			PICK IT UP: A musical piece about cooperating to help keep the environment clean by not littering.
7:00 – 8:00		▨		▨						▧	SCRATCH MY BACK:Elmo & friend"cooperate" by taking turns to help relieve an itch.
8:00 – 10:30		▨	▨							▧	NEWS FLASH – COOPERATION: Kermit and another reporter help each other out by sharing a story. They "cooperate" by "taking turns" asking each other questions about "cooperation".

TOTAL VIEWING TIME 10:17

VIEWING DAY 4
Emphasis: Sharing & Cooperation

Legend:
- production technique
- with verbal-labelling
- no verbal labelling

TIME	SECOND VIEWING	CONTENT				TECHNIQUE					SEGMENT SYNOPSIS
		HELPING	SHARING	TURN-TAKING	COOPERATION	LIVE-ACTION	PIXILATION	ANIMATION	MUPPETS	MUPPETS + PEOPLE	
0:00											
0:30											SCHOOL PLAY:
1:00											
1:30											A school play about the sun and a rain
2:00											cloud that learn to "cooperate" by
2:30											"taking turns" and "sharing" the sky
3:00											in order to help a seed grow into a
3:30											flower.
4:00											
4:30											
5:00											BUBBLES: A kid shares his toy with
5:30											others. All cooperate in taking turns
6:00											blowing bubbles.
6:30											GROVER AND THE MONSTERS: Grover
7:00											cooperates with a group of monsters by
7:30											playing his flute in their band.
8:00	from Day 2										PAINTING: Kids learn to "cooperate" by sharing
8:30											their materials so that each can paint.
9:00											SHARING:
9:30											Grover sings a song about "sharing"
10:00											while sharing lunch with Prairie.
10:30											
11:00											
11:30											
12:00											

TOTAL VIEWING TIME 10:43

VIEWING DAY 5

Emphasis: Helping & Cooperation

Legend:
- production technique with verbal-labelling
- no verbal labelling

TIME	SECOND VIEWING	HELPING	SHARING	TURN-TAKING	COOPERATION	LIVE-ACTION	PIXILATION	ANIMATION	MUPPETS	MUPPETS + PEOPLE	SEGMENT SYNOPSIS
		CONTENT				TECHNIQUE					
0:00											
0:30	Day 1				▨				▨		HARMONY: A cat helps other cats learn to "cooperate" by playing music together in harmony.
1:00											
1:30							▨	▨			TINY LITTLE SUPER GUY - BASEBALL: Tiny Little Super Guy helps a girl join a baseball game. She helps her team win. In the process, Tiny Little Super Guy gets hit in the face by the ball.
2:00											
2:30											
3:00											
3:30											
4:00										▨	CLUBHOUSE: Muppet kids "cooperate" to help fix up their clubhouse. Alone, each accomplished a little; but together, they accomplished a lot.
4:30											
5:00											
5:30											
6:00											
6:30					▨		▨	▨			EVERY BIT OF LITTER HELPS: A musical piece about cooperating to help keep the environment clean by not littering.
7:00											
7:30											
8:00											
8:30	Day 2				▨				▨		DAISY: Petals cooperate to form a daisy.
9:00											
9:30	from Day 1			▨	▨					▨	SCRATCH MY BACK: A musical number about cooperating to help relieve an itch by taking turns to scratch each other's backs
10:00											
10:30											
11:00											
11:30											
12:00											

TOTAL VIEWING TIME 10:42

VIEWING   DAY 6
Emphasis: Helping & Cooperation

Legend:
- production technique
- with verbal-labelling
- no verbal labelling

TIME	SECOND VIEWING	HELPING	SHARING	TURN-TAKING	COOPERATION	LIVE-ACTION	PIXILATION	ANIMATION	MUPPETS	MUPPETS + PEOPLE	SEGMENT SYNOPSIS
		CONTENT				TECHNIQUE					
0:00											
0:30 – 4:00	From Day 2				(no verbal labelling)	(production technique)					**OPERATION PLAYGROUND:** A group of kids designs a new playground. They mobilize their neighborhood to "help" build it.
4:30 – 7:00	From Day 3								(production technique)		**COOPERATION:** A musical number about "cooperation" in tending a garden together.
7:00 – 8:00	Day 1										**THE LION & THE MOUSE:** A lion does not eat a mouse. The mouse later "helps" the lion.
8:00 – 9:30			(no verbal labelling)								**STRANGER IN THE PARK:** A player helps a stranger join a baseball game. Everyone profits since the stranger helps them win.
9:30 – 10:30	Day 2		(no verbal labelling)								**NEEDLE AND THREAD:** The king's trousers rip. A needle and thread must learn to "cooperate" to help mend them.
11:00											
11:30											
12:00											

TOTAL VIEWING TIME 10:28

VIEWING   DAY 7
Emphasis: Sharing,Turn-taking & Cooperation

Legend:
- production technique
- with verbal-labelling
- no verbal labelling

Column headers (vertical):
SECOND VIEWING | HELPING | SHARING | TURN-TAKING | COOPERATION | LIVE-ACTION | PIXILATION | ANIMATION | MUPPETS | MUPPETS + PEOPLE

TIME	SECOND VIEWING	CONTENT	TECHNIQUE	SEGMENT SYNOPSIS
0:00				
0:30	From Day 1	SHARING, TURN-TAKING	LIVE-ACTION, PIXILATION, ANIMATION	TINY LITTLE SUPER GUY: TAKING TURNS: Tiny Little Super Guy helps a group of kids learn about "taking turns" and "cooperating" when sharing the use of a swing.
1:00				
1:30				
2:00				
2:30				
3:00				
3:30			MUPPETS	NEWSPAPER EXPEDITION: Bert tells Ernie it is his "turn" to get the newspaper from the store. Ernie uses every excuse he can think of to avoid doing so.
4:00				
4:30				
5:00				
5:30				
6:00				
6:30	Day 2		MUPPETS	CAR WASH: A group of animals "cooperate" to wash a car then take a ride together.
7:00				
7:30	From Day 2	SHARING, COOPERATION	MUPPETS + PEOPLE	THE KING'S PICNIC: A king decides to have a picnic. He tells his people what he wants them to bring to eat. They all bring the same thing. Finally the people learn to cooperate by planning what food each should bring to share so that their menu is varied.
8:00				
8:30				
9:00				
9:30				
10:00				
10:30	Day 4	SHARING, TURN-TAKING	MUPPETS	BUBBLES: A kid shares his toy with others. All cooperate in taking turns blowing bubbles.
11:00				
11:30				
12:00				

TOTAL VIEWING TIME 11:29

VIEWING   DAY 8
Emphasis: Sharing & Turn-taking & Cooperation

Key:
- ⧄ production technique
- ☐ with verbal-labelling
- ▨ no verbal labelling

Columns — SECOND VIEWING | CONTENT (HELPING, SHARING, TURN-TAKING, COOPERATION) | TECHNIQUE (LIVE-ACTION, PIXILATION, ANIMATION, MUPPETS, MUPPETS + PEOPLE) | SEGMENT SYNOPSIS

TIME	SECOND VIEWING	Content	Technique	SEGMENT SYNOPSIS
0:00–1:30	From Day 4	COOPERATION (no verbal labelling)	MUPPETS + PEOPLE	GROVER AND THE MONSTERS: Grover cooperates with a group of monsters by playing his flute in their band.
2:00–4:00	From Day 3	SHARING (no verbal labelling)	MUPPETS + PEOPLE	NEWS FLASH – COOPERATION: Kermit and another reporter help each other out by sharing a story. They "cooperate" by "taking turns" asking each other questions about "cooperation".
4:00–5:00	Day 3	TURN-TAKING & COOPERATION (no verbal labelling)	ANIMATION	RIGHT OF WAY: Mountain goats learn to cooperate by taking turns.
5:30–7:00	From Day 4	(verbal labelling)	MUPPETS + PEOPLE	SHARING: Grover sings a song about "sharing" while sharing his lunch with Prairie.
7:30–8:00		TURN-TAKING & COOPERATION (no verbal labelling)	MUPPETS	TAKING TURNS: Two balls cooperate by taking turns going down a chute.
8:00–11:30		SHARING (no verbal labelling)	MUPPETS + PEOPLE	THE KING'S THREE SONS: The king's three sons receive magic gifts. They set out to "help" the people of the kingdom with them. However, it is only when they learn to "cooperate" and share the gifts, that they are successful.

TOTAL VIEWING TIME 11:29

APPENDIX B

Neutral (Cognitive) Video-Type Daily Viewing

DAY 1

1.	Chick coming out of egg.	LIVE
2.	Letter "G"	ANIMATION
3.	Everybody eats.	LIVE
4.	Happy birthday to "U"	MUPPETS
5.	Countdown "10-1"	ANIMATION
6.	Visit to peanut butter factory.	LIVE
7.	"Snowman" poem.	ANIMATION
8.	"Heavy", "Light"	ANIMATION
9.	Password to cross a bridge - "Triangles"	ANIMATION
10.	A clown.	LIVE
11.	Opposites.	ANIMATION

DAY 2

1.	"Heavy" hippo.	ANIMATION
2.	Rhymes with "bark".	ANIMATION
3.	Hotdog bun.	LIVE-PIXILATION
4.	Little girl sings "a,b,c ...s"	ANIMATION
5.	Counting fish.	ANIMATION
6.	Opposites.	MUPPETS
7.	Truck goes to sawmill.	LIVE
8.	Letter "G".	ANIMATION
9.	Newsflash: "Little Red Riding Hood" ("mailman, woodsman ...man etc.)	MUPPETS

DAY 3

1.	Letter "I".	ANIMATION
2.	The weather (French).	ANIMATION
3.	Pinball "1-12".	ANIMATION
4.	Letter "B" (French).	ANIMATION
5.	Number "10" (French).	MUPPETS
6.	Number "10" (French).	ANIMATION
7.	Ducks like rain.	LIVE
8.	Letter "B".	ANIMATION
9.	Umbrella - "open", "closed" (English & French).	LIVE
10.	Number "10".	ANIMATION
11.	Letter "L".	ANIMATION

Day 4

1.	When I'm sad, I dance.	LIVE
2.	Letter "L" (French).	ANIMATION
3.	Number "11".	ANIMATION
4.	Winter is coming.	LIVE
5.	Rhymes with "Ch".	ANIMATION
6.	Little letter "L".	ANIMATION
7.	Truck working.	LIVE
8.	Pretending.	MUPPETS

DAY 5

1.	"H" for horse.	ANIMATION
2.	Dog "sits".	ANIMATION
3.	Pinball "1-11".	ANIMATION
4.	"H" for hat, hose, hook at firestation.	ANIMATION
5.	Animals.	LIVE
6.	Number "11".	ANIMATION
7.	Animals - camouflage.	LIVE
8.	"U" for uniform.	ANIMATION
9.	Drawing.	ANIMATION
(R)	Happy birthday to "U" (repeat from Day 1)	MUPPETS
11.	Hand mime of swan.	LIVE
12.	Number "2".	ANIMATION

DAY 6

1.	Letter "S".	ANIMATION
2.	Mimes and paintings.	LIVE
3.	Letter "J".	ANIMATION
4.	Baby learning to crawl, then walk.	LIVE
5.	Number "2"	ANIMATION
6.	Gameshow - number "2".	MUPPETS
7.	Tadpoles - frogs.	ANIMATION

DAY 7

1.	Taxi	ANIMATION
(R)	Peanut butter factory (repeat from Day 1)	LIVE
3.	Train - number "2".	ANIMATION
(R)	"Heavy", "Light" (repeat from Day 1)	ANIMATION
5.	Lizards.	LIVE
6.	Numbers "1-8".	ANIMATION
(R)	Dog "sits" (repeat from Day 5)	ANIMATION
8.	Letter "J".	ANIMATION
(R)	Number "11" (repeat from Day 4)	ANIMATION
10.	Clown - ears, nose, hair etc. (French)	ANIMATION

DAY 8

1.	Fleas camping on a dog.	ANIMATION
(R)	Opposites (repeat from Day 1)	ANIMATION
3.	Ants at a picnic (French).	ANIMATION
(R)	Animals (repeat from Day 5).	LIVE
5.	Gameshow - "Name that food".	MUFPETS
(R)	Opposites (repeat from Day 6)	MUPPETS
7.	Letter "L".	MUPPET + ACTOR
(R)	Number "10" (repeat from Day 3).	ANIMATION
(R)	Little girl sings "a,b,c ...s" (repeat from Day 2).	ANIMATION

APPENDIX C

Daily Instructions for Treatment Implementation

for all Four Conditions:

PTPA

PTNA

NTPA

NTNA

Thank you for your participation in this project!

LIST OF ENCLOSURES

1 VHS video cassette

2 Overview of Activities lists

8 Activity sheets (one for each day)

8 Comment sheets (one for each day)

Please note:

The viewing sequence for each day is approximately **10 minutes** in length. At the end of the sequence, there are about 6 seconds of black, followed by the heading for the next day. Simply play the tape on each day till you reach the black section. Then stop the tape. The next day, all you need to do is press PLAY again.

The activity sheets are color coded to match the Day headings on the video tape:

Day **1**	White
Day **2**	Yellow
Day **3**	Orange
Day **4**	Red
Day **5**	Pink
Day **6**	Light Green
Day **7**	Green
Day **8**	Light Blue

PTPA

Prosocial Video-Type

&

Prosocial (Cooperative) Activity-Type

Activities for Day 1

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 1.

IMMEDIATELY AFTER:

2. **Discuss** the story of <u>The Lion and the Mouse</u> shown in segment #1. Ask ..."How do you think the mouse felt when he helped the lion?" Then focus on how the children would feel if **they** were the characters in the story (ie. "How would you feel if you were the Lion?")

3. **Read** the story of <u>The Little Red Hen</u>.
In this story animals refuse to help the hen do the work required to make bread, so when the bread is ready, she eats it herself.

4. **Ask** the children what they think would happen if the animals had offered to help.

5. Then **ask for volunteers** to act out the story with the animals helping. In other words, when the little red hen asks "who will help me grind the wheat", the cat says "I will" ... etc.

6. At the end of the story **discuss** with the children how they would feel if they were the little red hen, and they had been helped, and how it would feel to be one of the helpers.

Activities for Day 2

VIEWING

1. **Show** the Sesame Street segment for Day 2.

IMMEDIATELY AFTER:

2. **Talk** about the King's Picnic segment just seen (#2). Ask the children ... "How would you feel if you were the King?" Because the people did not cooperate and plan what to bring, they all brought the same food to eat. Each should have brought something different. Discuss the concept of cooperation, and say that we will play a game where we will cooperate with each other to find what is the same.

3. **Distribute** a paper shape to each children, and play music. Make sure that there are more than one of each shape. While the music is playing, the children dance around and wave their shapes. When the music stops, the children find a partner who has the same shape. The children then trade shapes with others and begin again.

4. **Hand out** stretch ropes to groups of three or four children.
When you **call out** a shape, the children cooperate to make that shape with their rope. Have one group make a shape, then tell another group to make the same shape as the first group. Repeat several times telling the second group to make a different shape.

   Note: You can also try Cooperative shapes. When you call out a shape, the children cooperate to make that shape with their bodies.

Activities for Day 3

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 3.

IMMEDIATELY AFTER:

2. **Talk** about being friends. Taking turns is something friends do without fighting. When you wait patiently you get a turn faster. Ask the kids if they remember any turn-taking going on in the segments they saw (i.e. Kermit & reporter in #6; Elmo & kid in #5; goats in #2). Talk about the goats stuck on the ledge. Talk about how sometimes it's hard to wait for your turn. Ask..."How does it feel if somebody butts in front of you?"

3. **Give** each child a half a paper heart, and tell them that we're going to play a game to find a friend with the hearts. Tell them that when the music starts, they have to find the person with the matching (in color) half of their heart, and then dance together until the music stops.

4. **Make** sure everyone understands, and then play some lively **music** until everyone has found their partner.

5. **Sit in a circle**, collect the hearts, and say that we are going to play another game with friends. In this game one child skips (or walks) around the circle while **everyone sings:**

   > *Oh, will you be a friend of mine, a friend of mine, a friend of mine,*
   > *Oh will you be a friend of mine, and skip (or dance etc.) with me?*

   The child chooses a friend, and then they hold hands and skip around the circle together while everyone sings:

   > *Oh yes, I'll be a friend of yours, a friend of yours, a friend of yours*
   > *Oh yes, I'll be a friend of yours, and skip (or dance etc.) with you?*

   The first child then sits down and the second child skips around and chooses a child who has not yet had a turn. Continue until everyone has had a turn to choose a friend.

6. **Talk** about how it felt to be chosen as someone's friend. Praise them if they waited patiently for their turns.

Activities for Day 4

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 4.

IMMEDIATELY AFTER:

2. **Ask** the children what they think about the sun and rain <u>cooperating</u> to help the flower grow in the segment about the school play (#1) just seen. They had to <u>share</u> the job. Ask the children if they can think of any jobs around the daycare that people have to <u>cooperate</u> to do (ie. clean up).

3. **Ask** children if they think that they could act out the play about the flower growing. **Assign pairs or groups** of children to play different parts, while you **tell the story**. The parts are: the sun, clouds, rain & seeds.

> *Once upon a time there was a little seed*
> *lying in the ground waiting to grow.*
> *Along came the sun and said,*
> *"I will make the little seed grow."*
> *And he shone and shone and shone.*
> *But the little seed did not grow.*
> *Then along came a cloud who blocked out the sun and*
> *said,"I will make the little seed grow."*
> *And he rained and rained and rained.*
> *But the little seed did not grow.*
> *Then the sun got an idea and said,*
> *"We should take turns and cooperate to make the*
> *seed grow.*
> *First you rain on the seed, then I will shine on*
> *the seed."*
> *So they took turns raining and shining on the*
> *little seed, and it grew into a beautiful flower.*

4. Play cooperative musical chairs. In this **game** you eliminate chairs but not players. Players share their chairs and sit on each other's knees until everyone is sitting on one chair.

5. **Talk** about how everyone wins when you share the chairs.

Activities for Day 5

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 5.

IMMEDIATELY AFTER:

2. **Talk** about scratching someone's back (just seen in segment #6). Ask the children if they have ever had an itch they couldn't reach, and someone had to <u>help</u> them scratch it. Who scratched their back for them? Let's try taking turns to help scratch each other's backs!

3. Teach **song** <u>Scratch My Back</u>. Do it in pairs.

> *Scratch my back,*
> *Please Honey, won't you scratch my back?*
> *Really nothing to it*
> *Love it when you do it*
> *Baby, won't you scratch my back?*

4. Do partner <u>Head, Shoulders Knees and Toes</u>.
   Kids touch own eyes, ears, mouth and nose.

> *Head Shoulders Knees and Toes,*
> *Knees and Toes, Knees and Toes,*
> *Head Shoulders Knees and Toes,*
> *Eyes Ears Mouth and Nose.*

   Kids touch each other's head, shoulders, knees and toes; and their own eyes ears mouth and nose.

5. **Talk** about how it feels when we cooperate and help one another.

Activities for Day 6

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 6.

IMMEDIATELY AFTER:

2. **Talk** about working together to get something done. Did the kids see any examples of that in the segments they saw? (kids building playground in #1, muppets tending garden in #2, team winning game in #4, needle & thread sewing in #5). **Ask** the children if they have ever worked together, or played together with someone? How did it feel? Did they like to play together?

3. **Ask** if the children know that in order to take a ride in a boat, the paddles need to work together? Let's try it ... **Sing** partner <u>Row Row Row Your Boat</u>.

4. **Tell** the kids that they are now going to work together to build a huge boat out of blocks (or whatever materials are available) and take a trip.

5. **Build** boat together, then **sing** <u>Row Row Row Your Boat</u> again and take a pretend trip.

6. Cooperate to **clean up** as well. Ask children how many blocks they can carry? Can two people carry more together than alone?

Activities for Day 7

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 7.

IMMEDIATELY AFTER:

2. **Talk** about how everybody can have fun if you take turns as was seen in the <u>Sesame Street</u> segments. Ask the kids for examples (i.e. the kids on the swing in the Super Guy segment, #1; kids blowing bubbles in #5). Talk about how important it is to wait patiently for your turn. Now, let's take turns pinning the nose on a clown ...

3. **Play** <u>Cooperative Pin the Nose on the Clown</u>. Each child has a nose with Fun-tac on the back. Each takes a turn at trying to pin the nose on the clown, while the others try to help by calling out directions as to which way to move the nose. There is no competition for the "best" spot.

4. **Play** <u>Cooperative Log Roll</u>. The children lay on their stomachs on the floor, close beside each other. One child lies face-down across the others and they all roll together giving the child on top a ride. This is repeated until every child who wants a turn gets one.

   Note: If there is limited space, you can also try <u>Cooperative Caterpillar</u>: The first child sits on the ground with their legs apart. The next child sits in between the legs of the first, etc. Once all the children are seated, the "caterpillar" can move forward in unison.

Activities for Day 8

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 8.

IMMEDIATELY AFTER:

2. **Discuss** the segment where Prairie and Grover <u>share</u> lunch (#4). Do the kids like to share? Does it make them feel good to make someone else happy? What do they share with each other at the day care?

3. **Say** that today we are going to share paint and brushes and we are going to use one large sheet of paper to paint a rainbow.

4. Place a large sheet of **paper** on the floor. (If there are more than eight children in the group use two sheets of paper and divide the children into two groups. Make sure each child has a paint smock).

5. Put out one pot of **paint** for every two children so that they will have to share. Use as many different colors as possible, so they will have to trade colors to paint a rainbow. Ask one child to give each child a brush.

6. Do not tell children how to paint the rainbow. **Praise** their sharing and color combining but do not criticize their artistic work.

7. **Talk** about how it felt to work together to paint the beautiful rainbow. Put it up on the wall.

PTNA

Prosocial Video-Type

&

Neutral (Individualistic) Activity-Type

Activities for Day 1

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 1.

IMMEDIATELY AFTER:

2. **Discuss** the segment about <u>Ruby and the Count</u> (#2,#4) just seen. Comment on how Ruby tried to help the Count by counting raindrops. Ask if the children think it is possible to do such a thing ... "Could you count the raindrops?"

3. **Read** "Fish is Fish" by Leo Lionni.

4. **Sing** "Once I Caught a Fish".

> *1 2 3 4 5*
> *Once I caught a fish alive*
> *6 7 8 9 10*
> *Then I let him go again.*
> *Why did you let him go?*
> *Because he bit my finger so.*
> *Which finger did he bite?*
> *This little finger on the right.*

Activities for Day 2

VIEWING

1. **Show** the Sesame Street segment for Day 2.

IMMEDIATELY AFTER:

2. **Talk** about the King's Picnic segment just seen (#2).
   Because the people did not cooperate and plan what to
   bring, they all brought the same food to eat. Each
   should have brought something different. Say that we
   will play a game where we will find things that are the
   same and different.

3. **Distribute** a paper shape to each child and play **music**.
   While the music is playing, the children dance around and
   wave their shapes. When the music stops, call out a
   shape. The children with that shape sit down. Then they
   stand up. Repeat the process until all the shapes have
   been called.

4. **Hand out** some string to each child. When you call out a
   shape, the children make that shape out of their string.
   Make shapes with your string and tell the children to
   make the same or different shapes with theirs.

Activities for Day 3

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 3.

IMMEDIATELY AFTER:

2. **Talk** about taking turns, how important it is, what happens if you don't wait for your turn, and when you do wait patiently how you get a turn faster. Ask the children if they remember the segment about the goats stuck on the ledge (#2) who had to take turns? Who remembers how many goats there were? (there were 6). Say that we will sing a song where we will count ducks.

3. **Sing** <u>Five Little Ducks</u>, using actions.

> *Five little ducks went swimming one day*
(Hold up five fingers)
> *Over the pond and far away.*
(Wiggle fingers over your shoulder)
> *Mummy Duck said "QUACK,QUACK, COME BACK!"*
(Make hand Quack)
> *But only four little ducks came back* ·
(Bring back hand with four fingers up)

Continue until no ducks come back.

> *Then Daddy Duck said "QUACK QUACK COME BACK!"*
(Make exaggerated hand Quacks)
> *And five little ducks came swimming back.*
(Bring back hand with five fingers up.)

4. **Praise** the children if they participated and sang the song well. Tell them that they were so good at counting the ducks that you will read them a counting book.

5. **Read** counting book.

Activities for Day 4

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 4.

IMMEDIATELY AFTER:

2. **Ask** children what they think that about the sun and rain <u>cooperating</u> to help the flower grow in the segment about the school play (#1) just seen. Talk about how things grow, and how the seasons affect growth. Say that we will sing a song about things growing.

3. **Sing** <u>Oats and Peas and Barley Grow</u>.

> *Oats and peas and barley grow*
> *Oats and peas and barley grow*
> *Do you or I or anyone know*
> *How oats and peas and barley grow.*
>
> *First the farmer plants the seed.*
> *Then he stands and takes his heed.*
> *He stamps his feet and turns around*
> *And stands and looks around his land.*

4. Play **Musical Chairs.** Play the music, when it stops everyone tries to find a chair. The child who does not sits out the rest of the game.

Activities for Day 5

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 5.

IMMEDIATELY AFTER:

2. **Talk** about scratching someone's back (just seen in segment #6). Ask the children if they have ever had an itch they couldn't reach, and someone had to help them scratch it. Who did it for them? But usually, you can reach your own itch. For instance, if it were on your head, or shoulders, or knees ... or toes ...

3. **Sing** <u>Head Shoulders Knees and Toes</u>.

> *Head Shoulders Knees and Toes,*
> *Knees and Toes, Knees and Toes,*
> *Head Shoulders Knees and Toes,*
> *Eyes Ears Mouth and Nose.*

4. **Sing** <u>Two Little Blackbirds</u>

> *Two little blackbirds sitting on a wall,*
> *One named Peter, One named Paul.*
> *Fly away Peter, Fly away Paul*
> *Come back Peter, Come back Paul.*

Activities for Day 6

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 6.

IMMEDIATELY AFTER:

2. **Talk** about the needle and thread working together to sew up the king's pants as was just seen in segment #5. In the same way, you need both a boat and oars in order to take a boat ride. We are now going to play a game about taking boat rides.

3. **Sing** <u>Row Row Row Your Boat</u> as a group.

4. **Tell** the kids that they are going to build their own boat out of blocks (or whatever materials are available) and take a trip.

5. **Build** boats, then **sing** <u>Row Row Row Your Boat</u> again and take a pretend trip.

6. Make sure everyone **cleans up** their blocks. **Ask** children how many blocks they can carry?

Activities for Day 7

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 7.

IMMEDIATELY AFTER:

2. **Talk** about how everybody can have fun if you take turns as was seen in the <u>Sesame Street</u> segments. Ask the kids for examples (i.e. the kids on the swing in the Super Guy segment, #1; kids blowing bubbles in #5). Let's take turns pinning the nose on the clown ...

3. **Play** <u>Pin the Nose on the Clown</u>. Each child has a nose with Fun-tac on the back. The children compete for the closest spot.

4. **Sing** <u>Peter Hammers</u>. Children sit on the floor with their legs out in front of them:

They **pound** with 1 hand; then 2 hands; then 2 hands and 1 foot; then 2 hands and 2 feet; finally with two hands, two feet, and their head.

> *Peter hammers with one hammer, one hammer, one hammer*
> *Peter hammers with one hammer, all day long*
> *Peter hammers with two hammers, two hammers, two hammers*
> *Peter hammers with two hammers, all day long.*

Continue until five hammers

> *Peter's getting tired now, tired now, tired now.*
> *Peter's getting tired now, this fine day.*

Everybody lies down and pretends to sleep.
After a few minutes, they begin singing again

> *Peter wakes up now, wakes up now, wakes up now.*
> *Peter wakes up now this fine day.*

Everybody stretches and rubs their eyes.

> *Peter's working again now, again now, again now.*
> *Peter's working again now, all day long.*

Activities for Day 8

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 8.

IMMEDIATELY AFTER:

2. **Discuss** the segment about the <u>King's Three Sons</u> (#6) where the sons learn to share the magic gifts they received from the King.

3. **Say** that today everyone will get a chance to paint their own magic rainbow.

4. **Give** each child a sheet of paper, his\her own paint brushes and paint. Make sure each child has a paint smock.

5. **Use** as many different colors as possible, so they will make colorful rainbows.

6. Do not tell children how to paint the rainbow. **Praise** their color combining but do not criticize their artistic work.

7. **Talk** about how it felt to paint the beautiful rainbows. Put them up on the wall.

NTPA

Neutral (Cognitive) Video-Type

&

Prosocial (Cooperative) Activity-Type

Activities for Day 1

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 1.

IMMEDIATELY AFTER:

2. **Talk** about the <u>Peanut butter factory</u> in segment #6 just seen. Focus on how many people it takes to make peanut butter and how everybody has to do their share of work. Ask ... "Have you ever worked together with someone? Who? What were you doing?"

3. **Read** the story of <u>The Little Red Hen</u>.
   In this story animals refuse to help the hen do the work required to make bread, so when the bread is ready, she eats it herself.

4. **Ask** the children what they think would happen if the animals had offered to help.

5. Then **ask for volunteers** to act out the story with the animals helping. In other words, when the little red hen asks "who will help me grind the wheat", the cat says "I will" ... etc.

6. At the end of the story **discuss** with the children how they would feel if they were the little red hen, and they had been helped, and how it would feel to be one of the helpers.

Activities for Day 2

VIEWING

1. **Show** the Sesame Street segment for Day 2.

IMMEDIATELY AFTER:

2. **Talk** about the segment about opposites (#6) just seen. Discuss the concepts of same, different, and opposite, and say that we will play a game where we will help each other find what is the same.

3. **Distribute** a paper shape to each children, and play **music.** Make sure that there are more than one of each shape. While the music is playing, the children dance around and wave their shapes. When the music stops, the children find a partner who has the same shape. The children then trade shapes with others and begin again.

4. **Hand out** stretch ropes to groups of three or four children. When you **call out** a shape, the children cooperate to make that shape with their rope. Have one group make a shape, then tell another group to make the same shape as the first group. Repeat several times telling the second group to make a different shape.

   Note: You can also try Cooperative shapes. When you call out a shape, the children cooperate to make that shape with their bodies.

Activities for Day 3

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 3.

IMMEDIATELY AFTER:

2. **Talk** with the children about the ducks in one of the segments (#7) and how they like the rain. Point out how ducks like being together, just like friends do. Ask the children if they like to make new friends?

3. **Give** each child a half a paper heart, and tell them that we're going to play a game to find a friend with the hearts. Tell them that when the music starts, they have to find the person with the matching (in color) half of their heart, and then dance together until the music stops.

4. Make sure everyone understands, and then play some lively **music** until everyone has found their partner.

5. **Sit in a circle**, collect the hearts, and say that we are going to play another game with friends. In this game one child skips (or walks) around the circle while **everyone sings:**

> *Oh, will you be a friend of mine, a friend of mine, a friend of mine,*
> *Oh will you be a friend of mine, and skip (or dance etc.) with me?*

The child chooses a friend, and then they hold hands and skip around the circle together while everyone sings:

> *Oh yes, I'll be a friend of yours, a friend of yours, a friend of yours,*
> *Oh yes, I'll be a friend of yours, and skip (or dance etc.) with you?*

The first child then sits down and the second child skips around and chooses a child who has not yet had a turn. Continue until everyone has had a turn to choose a friend.

6. **Talk** about how it felt to be chosen as someone's friend. Praise them if they waited patiently for their turns.

Activities for Day 4

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 4.

IMMEDIATELY AFTER:

2. **Talk** about nature's seasons, which were the focus of segment #4 just seen. How do the seasons affect the growth of plants, trees, flowers ...? Talk about how many things have to work together in order to make something grow ... the sun, clouds, rain.

3. **Ask** children if they think that they could act out a play about a flower growing. **Assign pairs or groups** of children to play the different parts, while you **tell the following story.** The parts are: the sun, clouds, rain, and seeds.

> *Once upon a time there was a little seed*
> *lying in the ground waiting to grow.*
> *Along came the sun and said,*
> *"I will make the little seed grow."*
> *And he shone and shone and shone.*
> *But the little seed did not grow.*
> *Then along came a cloud who blocked out the sun and*
> *said, "I will make the little seed grow."*
> *And he rained and rained and rained.*
> *But the little seed did not grow.*
> *Then the sun got an idea and said,*
> *"We should take turns and cooperate to make the*
> *seed grow.*
> *First you rain on the seed, then I will shine on*
> *the seed."*
> *So they took turns raining and shining on the*
> *little seed, and it grew into a beautiful flower.*

4. **Tell** the children that you have a game to play where they have to work together.

5. Play cooperative musical chairs. In this **game** you eliminate chairs but not players. Players share their chairs and sit on each other's knees until everyone is sitting on one chair.

6. **Talk** about how everyone wins when you share the chairs.

Activities for Day 5

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 5.

IMMEDIATELY AFTER:

2. **Talk** about the mosquitoes biting the man in the nose in segment #12 just seen. That must have been really itchy. He could easily scratch it himself though. Ask the children if they have ever had an itch they couldn't reach, and someone had to help them scratch it. Let's try taking turns to help scratch each other's backs!

3. Teach a new **song** called <u>Scratch My Back</u>. Have the kids do it in pairs. If there are two teachers, you can demonstrate the song together and perhaps substitute "honey" and "baby" with your names.

   > *Scratch my back,*
   > *Please Honey, won't you scratch my back?*
   > *Really nothing to it*
   > *Love it when you do it*
   > *Baby, won't you scratch my back?*

4. Do partner <u>Head, Shoulders Knees and Toes</u>.
   Kids touch own eyes, ears, mouth and nose.

   > *Head Shoulders Knees and Toes,*
   > *Knees and Toes, Knees and Toes,*
   > *Head Shoulders Knees and Toes,*
   > *Eyes Ears Mouth and Nose.*

   Kids touch each other's head, shoulders, knees and toes; and their own eyes ears mouth and nose.

5. **Talk** about how it feels when we cooperate and help one another.

Activities for Day 6

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 6.

IMMEDIATELY AFTER:

2. **Talk** about the frog in segment #7. Comment on how much time frogs spend in the water. If people want to spent a long time in the water, they usually need boats. To make a boat go straight, the oars have to work together. If only one works, the boat goes in a circle.

3. **Tell** the children that we are now going to work together to row a boat. **Sing** partner <u>Row Row Row Your Boat</u>.

4. **Tell** the kids that they are going to work together to build a huge boat out of blocks (or whatever materials are available) and take a trip.

5. **Build** boat together, then **sing** <u>Row Row Row Your Boat</u> again and take a pretend trip.

6. Cooperate to **clean up** as well. Ask children how many blocks they can carry? Can two people carry more together than alone?

Activities for Day 7

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 7.

IMMEDIATELY AFTER:

2. **Talk** about the clown seen in segment #10. Does everyone know all the French words mentioned? Ask the class for answers as a group. Ask how many noses the clown had? Have they ever seen a clown with many noses? Today, they are going to make a funny clown with many noses.

3. **Play** <u>Cooperative Pin the Nose on the Clown</u>. Each child has a nose with Fun-tac on the back. Each takes a turn at trying to pin the nose on the clown, while the others try to help by calling out directions as to which way to move the nose. There is no competition for the "best" spot.

4. **Play** <u>Cooperative Log Roll</u>. The children lay on their stomachs on the floor, close beside each other. One child lies face-down across the others and they all roll together giving the child on top a ride. This is repeated until every child who wants a turn gets one.

   Note: If there is limited space, you can also try <u>Cooperative Caterpillar</u>: The first child sits on the ground with their legs apart. The next child sits in between the legs of the first, etc. Once all the children are seated, the "caterpillar" can move forward in unison.

Activities for Day 8

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 8.

IMMEDIATELY AFTER:

2. **Sing** the alphabet song just heard in segment #9. **Tell** the children that when you put letters together, they make words, and when you put colors together, they make rainbows.

3. **Say** that today we are going to share paint and brushes and we are going to use one large sheet of paper to paint a rainbow. Talk about how important it is to <u>share</u> the paint, to wait for your turn to use the color you want, and to <u>work together</u> to make a beautiful rainbow.

4. Place a large sheet of **paper** on the floor. (If there are more than eight children in the group use two sheets of paper and divide the children into two groups. Make sure each child has a paint smock).

5. Put out one pot of **paint** for every two children so that they will have to share. Use as many different colors as possible, so they will have to trade colors to paint a rainbow. Ask one child to give each child a brush.

6. Do not tell children how to paint the rainbow. **Praise** their sharing and color combining but do not criticize their artistic work.

7. **Talk** about how it felt to work together to paint the beautiful rainbow. Put it up on the wall.

NTNA

Neutral (Cognitive) Video-Type

&

Neutral (Individualistic) Activity-Type

Activities for Day 1

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 1.

IMMEDIATELY AFTER:

2. **Talk** about the <u>Peanut butter factory</u> in segment #6 just seen. Have the children **estimate** how many peanuts it takes to make a jar of peanut butter.

3. **Read** "Fish is Fish" by Leo Lionni.

4. **Sing** "Once I Caught a Fish".

> *1 2 3 4 5*
> *Once I caught a fish alive*
> *6 7 8 9 10*
> *Then I let him go again.*
> *Why did you let him go?*
> *Because he bit my finger so.*
> *Which finger did he bite?*
> *This little finger on the right.*

Activities for Day 2

VIEWING

1. **Show** the_Sesame Street_ segment for Day 2.

IMMEDIATELY AFTER:

2. **Talk** about the segment about <u>opposites</u> (#6) just seen. Discuss the concepts of <u>same</u>, <u>different</u>, and <u>opposite</u>. Say that we will play a game where we will each have a different, special part to play.

3. **Distribute** a paper shape to each child and play **music**. While the music is playing, the children dance around and wave their shapes. When the music stops, call out a shape. The children with that shape sit down. Then they stand up. Repeat the process until all the shapes have been called.

4. **Hand out** some string to each child. When you call out a shape, the children make that shape out of their string. Make shapes with your string and tell the children to make the same or different shapes with theirs.

Activities for Day 3

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 3.

IMMEDIATELY AFTER:

2. **Talk** with the children about the ducks in one of the segments (#7) and how they like the rain. Do people like rain? What do we <u>open</u> when we go out in the rain, and <u>close</u> when we come inside? (<u>umbrellas</u> - like in segment #9).

3. **Sing** <u>Five Little Ducks</u>, using actions.

> *Five little ducks went swimming one day*
(Hold up five fingers)
> *Over the pond and far away.*
(Wiggle fingers over your shoulder)
> *Mummy Duck said "QUACK,QUACK, COME BACK!"*
> *But only four little ducks came back*
(Bring back hand with four fingers up)

Continue until no ducks come back.

> *Then Daddy Duck said "QUACK QUACK COME BACK!"*
(Make exaggerated hand Quacks)
> *And five little ducks came swimming back.*
(Bring back hand with five fingers up.)

4. **Praise** the children if they participated and sang the song well. Tell them that they were so good at counting the ducks that you will read them a counting book.

5. **Read** counting book.

Activities for Day 4

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 4.

IMMEDIATELY AFTER:

2. **Talk** about nature's seasons, which were the focus of segment #4 just seen. How do the seasons affect the growth of plants, trees, flowers ...? Say that we will sing a song about things growing.

3. **Sing** <u>Oats and Peas and Barley Grow</u>.

> *Oats and peas and barley grow*
> *Oats and peas and barley grow*
> *Do you or I or anyone know*
> *How oats and peas and barley grow.*
>
> *First the farmer plants the seed.*
> *Then he stands and takes his heed.*
> *He stamps his feet and turns around*
> *And stands and looks around his land.*

4. Play **Musical Chairs**. Play the music, when it stops everyone tries to find a chair. The child who does not sits out the rest of the game.

Activities for Day 5

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 5.

IMMEDIATELY AFTER:

2. **Talk** about all the different kinds of animals just seen in segments #5 and #7. How are they different from us? Do they have heads, shoulders, knees, ... toes ...etc.

3. **Sing** <u>Head Shoulders Knees and Toes</u>.

> *Head Shoulders Knees and Toes,*
> *Knees and Toes, Knees and Toes,*
> *Head Shoulders Knees and Toes,*
> *Eyes Ears Mouth and Nose.*

4. **Sing** <u>Two Little Blackbirds</u>

> *Two little blackbirds sitting on a wall,*
> *One named Peter, One named Paul.*
> *Fly away Peter, Fly away Paul*
> *Come back Peter, Come back Paul.*

Activities for Day 6

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 6.

IMMEDIATELY AFTER:

2. **Talk** about the frog in segment #7. Comment on how much time frogs spend in the water. If people want to spent a long time in the water, they usually need boats. **Tell** the children that it is hard work rowing a boat.

3. **Sing** <u>Row Row Row Your Boat</u> as a group.

4. **Tell** the kids that they are going to build their own boats out of blocks (or whatever materials are available) and take a trip.

5. **Build** boats, then **sing** <u>Row Row Row Your Boat</u> again and take a pretend trip.

6. Make sure everyone **cleans up** their blocks. **Ask** children how many blocks they can carry?

Activities for Day 7

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 7.

IMMEDIATELY AFTER:

2. **Talk** about the clown seen in segment #10. Who knows some
of the French words mentioned? Ask for individual answers
from the kids. Ask how many noses the clown had. Tell the
children that they are going to play a game to see who
can come closest to putting the clown's nose in the right
place.

3. **Play** <u>Pin the Nose on the Clown</u>. Each child has a nose
with Fun-tac on the back. The children compete for the
closest spot.

4. **Sing** <u>Peter Hammers</u>. Children sit on the floor with their
legs out in front of them:

They **pound** with 1 hand; then 2 hands; then 2 hands and 1
foot; then 2 hands and 2 feet; finally with two hands,
two feet, and their head.

> *Peter hammers with one hammer, one hammer, one hammer*
> *Peter hammers with one hammer, all day long*
> *Peter hammers with two hammers, two hammers, two hammers*
> *Peter hammers with two hammers, all day long.*

Continue until five hammers

> *Peter's getting tired now, tired now, tired now.*
> *Peter's getting tired now, this fine day.*

Everybody lies down and pretends to sleep.
After a few minutes, they begin singing again

> *Peter wakes up now, wakes up now, wakes up now.*
> *Peter wakes up now this fine day.*

Everybody stretches and rubs their eyes.

> *Peter's working again now, again now, again now.*
> *Peter's working again now, all day long.*

Activities for Day 8

VIEWING:

1. **Show** the <u>Sesame Street</u> segment for Day 8.

IMMEDIATELY AFTER:

2. **Sing** the alphabet song just heard in segment #9. **Tell**
    the children that when you put letters together, they
    make words, and when you put colors together, they make
    rainbows.

3. **Say** that today we are going to paint our own rainbows.

4. **Give** each child a sheet of paper, his\her own paint
    brushes and paint. Make sure each child has a paint
    smock.

5. **Use** many different colors as possible, so they will make
    colorful rainbows.

6. Do not tell children how to paint the rainbow. **Praise**
    their color combining but do not criticize their artistic
    work.

7. **Talk** about how it felt to paint the beautiful rainbows.
    Put them up on the wall.

APPENDIX D

Observation Scheme

FREE PLAY

DAY CARE:_____   DATE:_____

OBSERVER:_____ _____

OBSERVATION: PRE   POST

PROSOCIAL   **ANTISOCIAL**

P   Positive Interaction   A   Affection   GB Grabbing
CO Cooperation   CM Comforting   VA Verbal Aggression
H   Helping   TT Turn-Taking   PA Physical Aggression
G   Giving   S   Sharing   EX Excluding

NAME   **ACTIVITY**   **BEHAVIOR**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

A P P E N D I X   E

Preschool Social Behavior Questionnaire

Pretest

Posttest

Source of Questions

Pretest

PRESCHOOL SOCIAL BEHAVIOR QUESTIONNAIRE
(PRETEST)

Child's Name: _____ Sex (circle)   M   F

Parent's Name:_____

Address:_____   M   D   Y

_____ Present date: ___   ___   ___

_____ Child's Birthday:___   ___   ___

Rated by: _____

Title of rater:_____

School attending:_____

Length of time rater has worked
with child (months or weeks) _____

Instructions:

Following is a series of descriptions of behavior often shown by preschoolers. After each statement are three columns, "Doesn't Apply", "Applies Sometimes", and "Certainly Applies". If the child shows the behavior described by the statement frequently or to a great degree, place an "X" in the space under "Certainly Applies". If the child shows behavior described by the statement to a lesser degree or less often, place an "X" in the space under "Applies Sometimes". If, as far as you are aware, the child does not show the behavior, place an "X" in the space under "Doesn't Apply".

Please put ONE "X" for EACH statement.

	Doesn't Apply	Applies Sometimes	Certainly Applies
1. Spells own name independently	_____	_____	_____
2. Is considerate and thoughtful of other children.	_____	_____	_____
3. Restless. Runs about or jumps up and down. Doesn't keep still.	_____	_____	_____
4. Is warm and responsive.	_____	_____	_____
5. Blames others.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
6. Offers to help other children who are having difficulty with a task.	_____	_____	_____
7. If there is a quarrel or dispute, will try to stop it.	_____	_____	_____
8. Identifies different colors.	_____	_____	_____
9. Gets along well with other children.	_____	_____	_____
10. Destroys own or other's belongings.	_____	_____	_____
11. Has poor concentration or short attention span.	_____	_____	_____
12. Is admired and sought out by other children.	_____	_____	_____
13. Is shy and reserved; makes social contacts slowly.	_____	_____	_____
14. Tell lies.	_____	_____	_____
15. Is protective of others.	_____	_____	_____
16. Fights with other children.	_____	_____	_____
17. Is eager to please other children.	_____	_____	_____
18. Is afraid of being deprived; is concerned about getting enough (e.g., with respect to affection, food, toys, etc.).	_____	_____	_____
19. Sorts objects into groups.	_____	_____	_____
20. Tends to arouse liking and acceptance in adults.	_____	_____	_____
21. Offers to share objects being used in a task.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
22. Teases other children in an insensitive manner.	_____	_____	_____
23. Will invite bystanders to join in a game.	_____	_____	_____
24. Is verbally aggressive.	_____	_____	_____
25. Tends to imitate and take over the characteristic manners and behaviors of those admired.	_____	_____	_____
26. Not much liked by other children.	_____	_____	_____
27. Helps other children who are feeling sick.	_____	_____	_____
28. Is unable to delay gratification; cannot wait for satisfactions.	_____	_____	_____
29. Is an interesting, arresting child.	_____	_____	_____
30. Shares out food.	_____	_____	_____
31. Recognizes different animals.	_____	_____	_____
32. Gives up easily.	_____	_____	_____
33. Shows sympathy to someone who has made a mistake.	_____	_____	_____
34. Bullies other children.	_____	_____	_____
35. Tends to be fearful of afraid of new things or new situations.	_____	_____	_____
36. Stares into space.	_____	_____	_____
37. Doesn't share toys.	_____	_____	_____
38. Spontaneously helps to pick up objects which another child has dropped.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
39. Overreacts to minor frustrations; is easily irritated and/or angered.	_____	_____	_____
40. Spontaneously counts out loud.	_____	_____	_____
41. Takes the opportunity to praise the work of other children.	_____	_____	_____
42. Is easily victimized by other children; tends to be treated as a scapegoat.	_____	_____	_____
43. Kicks, bites, or hits other children.	_____	_____	_____
44. Inattentive.	_____	_____	_____
45. When in conflict or disagreement with others, tends to yield and give in.	_____	_____	_____
46. Inconsiderate of other children.	_____	_____	_____
47. Is worried. Worries about many things.	_____	_____	_____
48. Tries to be fair in games.	_____	_____	_____
49. Cries easily.	_____	_____	_____
50. Is disobedient.	_____	_____	_____
51. Comforts a child who is crying or upset.	_____	_____	_____
52. Tends to do things on his/her own, rather solitary.	_____	_____	_____
53. Identifies different shapes (circles, squares, triangles ...)	_____	_____	_____
54. Volunteers to clear up a mess someone else has made.	_____	_____	_____
55. Can work easily in a small peer group.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
56. Shows a recognition of the feelings of others; is empathic.	_____	_____	_____
57. Appears miserable, unhappy, tearful, or distressed.	_____	_____	_____
58. Will try to help someone who has been hurt.	_____	_____	_____
59. Will smile or respond to someone else's achievement or happiness.	_____	_____	_____
60. Repeats familiar songs and finger plays.	_____	_____	_____
61. Squirmy, fidgety child	_____	_____	_____

Posttest

PRESCHOOL SOCIAL BEHAVIOR QUESTIONNAIRE
(POSTTEST)

Child's Name: _____ Sex (circle)   M   F

Parent's Name:_____

Address:_____   M   D   Y

_____ Present date: ___ ___ ___

_____ Child's Birthday:___ ___ ___

Rated by: _____

Title of rater:_____

School attending:_____

Length of time rater has worked
with child (months or weeks) _____

**Instructions: When answering please keep the past two
weeks in mind.**

Following is a series of descriptions of behavior often shown
by preschoolers. After each statement are three columns,
"Didn't Apply", "Applied Sometimes", and "Certainly Applied".
If during this period the child showed the behavior described
by the statement frequently or to a great degree, place an
"X" in the space under "Certainly Applied". If the child
showed behavior described by the statement to a lesser degree
or less often, place an "X" in the space under "Applied
Sometimes". If, as far as you are aware, the child did not
show the behavior at all, place an "X" in the space under
"Didn't Apply".

Please put ONE "X" for EACH statement.

	Doesn't Apply	Applies Sometimes	Certainly Applies
1. Repeated familiar songs and finger plays.	_____	_____	_____
2. Was considerate and thoughtful of other children.	_____	_____	_____
3. If there was a quarrel or dispute, tried to stop it.	_____	_____	_____
4. Offered to help other children who were having difficulty with a task.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
5. Destroyed own or other's belongings.	_____	_____	_____
6. Got along well with other children.	_____	_____	_____
7. Recognized different animals.	_____	_____	_____
8. Blamed others.	_____	_____	_____
9. Was warm and responsive.	_____	_____	_____
10. Was protective of others.	_____	_____	_____
11. Sorted objects into groups.	_____	_____	_____
12. Fought with other children.	_____	_____	_____
13. Was eager to please other children.	_____	_____	_____
14. Offered to share objects that were being used in a task.	_____	_____	_____
15. Teased other children in an insensitive manner.	_____	_____	_____
16. Would invite bystanders to join in a game.	_____	_____	_____
17. Was verbally aggressive.	_____	_____	_____
18. Identified different colors	_____	_____	_____
19. Helped other children who were feeling sick.	_____	_____	_____
20. Was unable to delay gratification; could not wait for satisfactions.	_____	_____	_____
21. Shared out food.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
22. Showed sympathy to someone who had made a mistake.	_____	_____	_____
23. Spelled own name independently.	_____	_____	_____
24. Bullied other children.	_____	_____	_____
25. Didn't share toys.	_____	_____	_____
26. Spontaneously helped to pick up objects which another child had dropped.	_____	_____	_____
27. Took the opportunity to praise the work of other children.	_____	_____	_____
28. Kicked, bit, or hit other children.	_____	_____	_____
29. Identified different shapes (circles, squares, triangles ...)	_____	_____	_____
30. Tried to be fair in games.	_____	_____	_____
31. Was inconsiderate of other children.	_____	_____	_____
32. Was disobedient.	_____	_____	_____
33. Comforted a child who was crying or upset.	_____	_____	_____
34. Tended to do things on his/her own; rather solitary.	_____	_____	_____
35. Volunteered to clear up a mess someone else had made.	_____	_____	_____
36. Could work easily in a small peer group.	_____	_____	_____
37. Showed recognition of the feelings of others; was empathic.	_____	_____	_____
38. Spontaneously counted out loud.	_____	_____	_____

	Doesn't Apply	Applies Sometimes	Certainly Applies
39. Would try to help someone who had been hurt.	_____	_____	_____
40. Would smile or respond to someone else's achievement or happiness.	_____	_____	_____
41. Appeared miserable, unhappy, tearful, or distressed.	_____	_____	_____

Source of Questions

PRESCHOOL SOCIAL BEHAVIOR QUESTIONNAIRE
(Source of Questions)
* = edited item

Note:
> The actual questionnaires given to caregivers were labelled *Preschool Behavior Questionnaire*. The word *social* was omitted in order to encompass the distractor cognitive questions.

PROSOCIAL SET OF QUESTIONS

PSBQ(a) Will invite bystanders to join in a game.
PSBQ(a) Helps other children who are feeling sick.
PSBQ(a) Shows sympathy to someone who has made a mistake.
PSBQ(a) Tries to be fair in games.
PSBQ(a) Comforts a child who is crying or upset.
PSBQ(a) Volunteers to clear up a mess someone else has made.
PSBQ(a) Can work easily in a small peer group.
PSBQ(a) Will try to help someone who has been hurt.
PSBQ(a) If there is a quarrel or dispute, will try to stop it.
PSBQ(a)* Will smile or respond to someone else's achievement or happiness.
> *(original: Will clap or smile if someone else does something well in a class)*

PSBQ(a)* Spontaneously helps to pick up objects which another child has dropped.
> *(original has added at the end: (eg. pencils, books, etc.))*

PSBQ(a)* Offers to help other children who are having difficulty with a task.
> *(original has added at the end:...in the classroom)*

PSBQ(a)* Offers to share objects being used in a task.
> *(original: Offers to share rubbers or pencil being used in a task)*

PSBQ(a)* Shares out food.
> *(original : Shares out sweets or extra food)*

PSBQ(a)* Takes the opportunity to praise the work of other children.
> *(original: Takes the opportunity to praise the work of less able children)*

CCQ Is considerate and thoughtful of other children.
CCQ Is warm and responsive.
CCQ Gets along well with other children.
CCQ Is protective of others.
CCQ Shows a recognition of the feelings of others; is empathic.
CCQ* Is eager to please other children.
> *(original: Is eager to please.)*

ANXIOUS/DISRUPTIVE BEHAVIOR SET OF QUESTIONS

PSBQ(b)	Appears miserable, unhappy, tearful, or distressed.
PSBQ(b)	Blames others.
PSBQ(b)	Destroys own or other's belongings.
PSBQ(b)	Fights with other children.
PSBQ(b)	Bullies other children.
PSBQ(b)	Doesn't share toys.
PSBQ(b)	Kicks, bites, or hits other children.
PSBQ(b)	Is disobedient.
PSBQ(b)*	In. nsiderate of other children. *(original: Inconsiderate of others)*
PSBQ(b)*	Tends to do things on his/her own, rather solitary. *(added "her")*
CCQ	Is unable to delay gratification; cannot wait for satisfactions.
CCQ*	Teases other children in an insensitive manner. *(original: Teases other children (including siblings)*
CCQ*	Is verbally aggressive. *(original: Is aggressive (physically or verbally)*

ANXIOUS/DISRUPTIVE PERSONALITY SET OF QUESTIONS (pretest only)

PSBQ(b)	Restless. Runs about or jumps up and down. Doesn't keep still.
PSBQ(b)	Has poor concentration or short attention span.
PSBQ(b)	Tell lies.
PSBQ(b)	Not much liked by other children.
PSBQ(b)	Gives up easily.
PSBQ(b)	Tends to be fearful of afraid of new things or new situations.
PSBQ(b)	Stares into space.
PSBQ(b)	Inattentive.
PSBQ(b)	Is worried. Worries about many things.
PSBQ(b)	Cries easily.
PSBQ(b)	Squirmy, fidgety child.
CCQ	Is easily victimized by other children; tends to be treated as a scapegoat.
CCQ	When in conflict or disagreement with others tends to yield and give in.
CCQ	Overreacts to minor frustrations; is easily irritated and/or angered.
CCQ	Is shy and reserved; makes social contacts slowly.
CCQ	Is afraid of being deprived; is concerned about getting enough (e.g., with respect to affection, food, toys, etc.

COGNITIVE SET OF QUESTIONS

orig.	Spontaneously counts outs loud.
orig.	Identifies different colors.
orig.	Identifies different shapes (circles, squares, triangle ...).
orig.	Recognizes different animals.
orig.	Repeats familiar songs and finger plays.
orig.	Spells own name independently.
orig.	Sorts objects into groups.

OTHER QUESTIONS (pretest only)

1. POPULAR WITH PEERS

CCQ Is admired and sought out by other children.

2. CAREGIVER BIAS

CCQ Tends to arouse liking and acceptance in adults.
CCQ Is an interesting, arresting child.

3. TENDENCY TO RESPOND TO MODELLING

CCQ Tends to imitate and take over the characteristic manners and behaviors of those admired.

TOTAL: 61 Questions:

7 orig. Distractor questions: Original, designed specifically for this study

18 CCQ California Child Q-Sort questions (Block & Block, 1969)

36 PSBQ Preschool Social Behavior Questionnaire (Tremblay, Vitaro, Gagno, Piché & Royer, 1989), originally from:

15 PSBQa Prosocial Behavior Questionnaire (Weir, Stevenson & Graham, 1980)

21 PSBQb Preschool Behavior Questionnaire (Behar & Stringfield, 1974)

All 61 included in the pretest. 20 were dropped from the posttest; these being the questions where a change was not expected in two weeks (the 4 OTHER and 16 ANXIOUS/DISRUPTIVE questions).

APPENDIX F

Perspective-Taking Ability Test

Situational Test of Altruism

Perspective Taking Test

School: _____

Name: _____

Date: _____

Test: PRE   POST

                   BEAR   PARTY

You   **feel today**

                 see

Pat   **see**

                 do

                 feel

                 think

If **you** were Pat   **do**

                 feel

                 think

Kim   **see**

Kim **...** Pat   **see**

                 do

                 feel

                 think

Sharing: _____

                 out of 5

APPENDIX G

Description of Field Setting

DESCRIPTION OF FIELD SETTING:

NAME OF DAYCARE: _____

ADDRESS: _____

_____

NUMBER OF KIDS IN DAYCARE: _____

FULL-TIME: _____

PART-TIME _____

NUMBER OF KIDS PER CLASS _____

CAREGIVER TO CHILD RATIO _____

AGE DIVISIONS? _____

NO. CLASSES _____

ETHNIC DIVERSITY

_____

_____

TV VIEWING

_____

_____

ACTIVITY CENTERS

_____

_____

_____

_____

PROGRAM (list what you see offered in these areas)

COGNITIVE

_____

_____

_____

LANGUAGE (oral & written, ie. stories)

_____

_____

_____

SOCIAL SKILLS

_____

_____

_____

CREATIVITY

_____

_____

_____

PHYSICAL COORDINATION

_____

_____

_____

PERSONAL CARE ROUTINE

(hygiene - groom, toilets, snacks/meals rest time)

_____

_____

SCHEDULES PER AGE GROUP (ANNEX TO THIS)

RATING
(based on Early Childhood Observation Instrument
Bredekamp, 1985)

STAFF-CHILD INTERACTION:

		Often	Sometimes	Rarely
1.	The overall sound of the group is pleasant most of the time.	____	____	____
2.	Staff interact frequently with children,showing affection and support.	____	____	____
3.	Staff are responsive to children.	____	____	____
4.	Staff speak with children in a friendly, courteous manner.	____	____	____
5.	Staff encourage independence in children as they are ready.	____	____	____
6.	Staff use positive approaches to help children behave constructively (no physical punishment or other negative discipline methods that frighten or humiliate)	____	____	____

CHILD-CHILD INTERACTION

		Often	Sometimes	Rarely
7.	Children are generally comfortable, relaxed,happy & involved in play or other activities	____	____	____
8.	Staff expectations of children's social behavior are developmentally appropriate.	____	____	____
9.	Children are encouraged to talk about feelings instead of solving problems with force.	____	____	____
10.	Staff encourage children's prosocial behaviors such as cooperation, helping, taking turns, talking to solve problems.	____	____	____

PHYSICAL ENVIRONMENT

	Above Average	Average	Below Average

11. There is natural light (windows). _____ _____ _____

12. The center is noticeably clean. _____ _____ _____

13. There is enough usable space indoors and outdoors so that children are not crowded. _____ _____ _____

14. Activity areas are defined by spatial arrangements. _____ _____ _____

15. Space is arranged to accommodate children individually, in small and large groups. _____ _____ _____

16. A variety of age-appropriate materials and equipment is accessible to children. _____ _____ _____

17. Individual space is provided for child's belongings. _____ _____ _____

18. Sound-absorbing materials such as ceiling tile and rugs are used to cut down noise. _____ _____ _____

19. The outdoor play area is protected from access to street or other dangers. A variety of activities can go on outdoors all year round. _____ _____ _____

20. The environment includes many soft elements; rugs, cushions, rocking chairs, soft furniture, soft toys, adults who cuddle children etc. _____ _____ _____

21. Private areas are available where children can play, work alone or with a friend (enclosed book corners, lofts, playhouses etc.). _____ _____ _____

COMMENTS: _____

_____

_____

APPENDIX H

Caregiver Daily Log

CAREGIVER'S COMMENTS:

Daily Log

YOUR NAME: _____

DAYCARE: _____

DATE: _____

DAY (circle for which day)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

How did your class respond to the <u>Sesame Street</u> segments and activities?

_____

_____

_____

_____

_____

_____

_____

_____

_____

Have you done any of these activities with your class before?

YES _____ NO _____

If yes, which ones?

_____

_____

_____

_____

_____

_____

_____

Thank you for your feedback!

Please mark which kids were absent today on the back.

APPENDIX I

Parental Permission Letter

.

Dear Parents:

In the next few weeks your child will be participating in some cooperative learning activities as part of their regular daycare program. These activities are part of a research project on the effects of small group activities on the social development of young children. In conjunction with the project, we will be showing segments of <u>Sesame Street</u>, observing, and playing games with the children.

This research project is being conducted by the Centre for the Study of Classroom Processes, Department of Education, Concordia University, on the types of class activities that promote the social development of young students. Should you have any questions about the research, please do not hesitate to call Bette Chambers at 848-2013 or 453-8691, or Ida Eva Zielinska at 848-8619 or 934-3317.

We would appreciate if you would sign and return the form below, promptly. Thanking you for your cooperation, we remain,

Sincerely,

Dr. Bette Chambers
Assistant professor, Early Childhood Education

Ida Eva Zielinska
M.A. Candidate, Educational Technology

....

Child's name: _____

Birthdate: _____

_____ I **give** permission for my child to participate in the research project.

_____ I **do not give** permission for my child to participate in the research project.

_____   _____

Date   Signature of parent or guardian

APPENDIX J

Type of Free-Play per Daycare Setting

PTPA

Setting 1:

Activities available: A wide range of activities were set up to accommodate children in small groups, in a choice of two rooms. The same range was made available daily, with no novel activities being introduced. Some activities were prepared, others simply involved the use of existing materials. A large dramatic play area (a house within which children could play) and fantasy play materials were available daily in one of the rooms used for free-play.

Play: Free choice was allowed of what children played with and for how long. However, in one of the rooms available for free-play, children had to ask permission to move, and could only move if there was a space available at the next activity. Play partnerships varied from day to day, although some persisted. However, in one of the rooms, they were often broken since only a single child would get permission to change activities at a time.

Supervision: Caregivers played along with children, and supervised the class in an unobtrusive manner, mostly through individual attention. War play was discouraged, but in a personal way, without involving anyone but the perpetrators.

PTPA

<u>Setting 2</u>:

Activities available: A wide range of activities were set up to accommodate children in small groups, including an occasional obstacle course. An effort was made to vary the type of available that were prepared each day, as well as to provide novel activities. Fantasy play materials were available daily, and a limited dramatic play area (a kitchen) was available.

Play: Children chose where they wanted to play, and for how long. They moved to the next activity they chose, once a space was available, or took turns unsupervised, as the case may be (i.e., for the obstacle course). They did not have to ask permission to move. Play partnerships varied from day to day, although some persisted.

Supervision: Supervision was interactive. Caregivers spent their time played with children, supervising the class in an unobtrusive manner. Aggressive war play was not allowed. This was enforced by calling for the attention of the whole class, whereupon the entire group would remind the perpetrators what the rules were.

PTNA

<u>Setting 1</u>:

Activities available: All the materials and toys present in the class were made available for play each day. No "activities" were prepared. Nothing new was introduced from day to day. There was a large loft designed for dramatic play, housing many fantasy play materials. However, this section was only open for play occasionally.

Play: Children chose where they wanted to play, and for how long. They moved around the room freely, without asking permission. Play partnerships varied from day to day, although some persisted.

Supervision: Caregivers played along with children. Supervision was interactive and unobtrusive. War play was tolerated unless it became too rowdy or dangerous.

PTNA

<u>Setting 2</u>:

Activities available: Activities were not set up. Children could simply play with anything, as they pleased. One dramatic play area (a kitchen) housed in a separate small room, with a range of fantasy play materials, was available and open for daily use.

Play: Children chose were they wanted to play and for how long. They moved around the room freely. Play partnerships were more or less stable from day to day, creating a "clique" type of atmosphere, with conflict sometimes arising between cliques. The research team was informed that such child-controlled free-play was rare, and was only allowed to accommodate the research project. Usually, the time was used for finishing art projects (which were rigid and procedural - all did the same thing).

Supervision: The class was minimally supervised. War play was allowed and left unchecked. Caregivers gave individual attention to children, pretty much letting the rest of the class be.

NTPA

<u>Setting 1</u>:

Activities available: A limited range of activities was set up to accommodate children in small groups (as few as a choice of two activities per free-play period). There were limited materials, and only a small range of types of activities prepared. Variation from day to day was not stressed. On occasion, a larger gym room was made available for free-play. There were some fantasy play materials there, as well as gym objects that could function as dramatic play areas.

Play: Children did not always get to choose where they could play. They were often told what to do, and for how long. Rules as to moving were arbitrary, based on individual interactions between caregiver and child. Play partnerships were not stable. Usually, children played in small groups (less than eight) in their regular class. As a result of the research project, two classes were combined for free-play for part of the observation time.

Supervision: Caregivers spent their time supervising. They did not play along with children. They often gave orders and directions as to who should do what and how. War play was allowed and left unchecked.

NTPA

<u>Setting 2</u>:

Activities available: A limited range of activities was provided, usually two at large tables, and c.... on mats on the floor. Materials available were few and often age-inappropriate. The same activities were made available every day. One dramatic play area (a kitchen) was available, and open for daily play. Some fantasy play materials were available as well.

Play: Children were assigned where to play, and had to ask permission to move between activities, sometimes having to wait up to ten minutes before being allowed to move. When they moved, the entire group they had been playing with moved as well. There was little evidence of play partnerships. However, some children stayed together due to same mother tongue language use, and limited knowledge of English. Conflict between different language groups sometimes arose.

Supervision: Caregivers spent their time supervising, or taking care of tasks to be done. They did not play along with children. Children were often discouraged from singing or talking too loudly, or playing in certain ways. War play was tolerated. However, since the room was small, it was usually while children were seated and was calm rather than aggressive.

NTNA

<u>Setting 1</u>:

Activities available: Some activities were set up, and what materials were available in the class were open for free play. There was an abundance of fantasy play materials, and dramatic play areas.

Play: Children chose where they wanted to play, and for how long. They moved around the room freely without asking permission. The group was highly interactive and cohesive. Large group fantasy play would start spontaneously on a daily basis. Stable play partnerships were evident.

Supervision: Interactive and unobtrusive supervision was provided. The primary function of the caregivers was as play partners. War play was not allowed, although sometimes passed unnoticed.

NTNA

Setting 2:

Activities available: A limited range of activities were set up to accommodate children in small groups. Individual play was encouraged and accommodated as well.

Play: Children did not get to choose where they could play. They were often told what to do, and for how long. If they did not play correctly, they were sometimes told to play alone, doing what was assigned (solitary paper and pencil tasks).

Supervision: Caregivers spent their time supervising. They did not play along with children. They often gave orders and directions as to who should do what and how. War play was allowed and left unchecked. The noise level of the class was strictly controlled.