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The Influence of Situational Organization, Age Gender, and Peer Group Interaction on the Emergence of the Early Social Self

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The Influence of Situational Organization, Age Gender, and Peer Group Interaction on the Emergence of the Early Social Self

A Thesis
Presented to
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Western Kentucky University
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In Partial Fulfillment
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Master of Arts

By
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The Influence of Situational Organization, Age, Gender, and Peer Group Interaction on the Emergence of the Early Social Self

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I want to thank my wife Edie for her support and encouragement and my parents for all of their support over the years. I want to thank the entire WKU Sociology Department for the education I received! Thanks to the teachers and children at WKUCCC. Special thanks to James Grimm, Anne Onyekwuluje and Joan Krenzin for all of their assistance. Thank you, Paul Wozniak, for admitting me into the graduate program! Thank you, Steve Groce, for continually inspiring me to pursue less traveled avenues of sociology!!
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THE INFLUENCE OF SITUATIONAL ORGANIZATION, AGE GENDER, AND PEER GROUP INTERACTION ON THE EMERGENCE OF THE EARLY SOCIAL SELF

Philip Williams

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Directed by: Steve Groce, James Grimm, and Anne Onyekwuluje

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The objective of the present study was to investigate the influence of preschool learning environments on the frequency of prosocial behaviors. The analyses were conducted according to gender, age, and whether the activity was child-chosen or teacher-imposed. The behaviors for analysis included responding prosocially to verbal massages from other children, engaging in cooperative play, attending to cries and pleas of others, and commenting on behavior of others when potentially dangerous. The data were gathered through nonparticipant observations, teacher interviews, and a behavior checklist. Nonparametric statistical analyses were used to analyze the data. Results indicated that older girls were more likely to exhibit prosocial behaviors than all boys regardless of learning center, and younger boys were more likely to increase prosocial behaviors during teacher-imposed activities than any other group. In addition, the art center had a significantly higher mean number of prosocial acts than other centers. The findings yielded an archive of direct social behavior observations across situations and over repeated occasions. The research method allowed me to investigate the natural organization of the children’s behavior without the usual reliance on self reports and tester-created situations. Based on these results, the
researcher offered theoretical propositions for future research to test the relationship between preschool learning environments and prosocial behaviors.
CHAPTER I

INTRODUCTION

The increase of single parent homes and two income households has added to the need for some form of organized child-care in many families. According to a 1997 report on child-care, 10.3 million preschoolers had working mothers. Thirty percent of these children attended some form of organized child care (Casper 1998, p.7). As more children attend private, state, and community-based early education programs, the amount of time that children spend with their family declines. Consequently, this condition causes more children's socialization processes to be influenced at a younger age by people outside their families. This situation raises several questions: How does early group socialization by child-care professionals, rather members of the family affect the social skills of the children? Do children receive positive reinforcement often enough when they are but one of fifteen other children? In what ways do preschool classroom environments provide positive atmospheres for prosocial behaviors to thrive? Do child-care centers employ curricula that positively affect social competency? Do child-care workers concentrate more of their attention to redirecting aggressive action than praising prosocial behavior?
Purpose of Study

The intention of this research was originally a single question. Do learning environments affect the frequency of prosocial behaviors? After the research began, the purpose of the study became twofold. One objective was to describe the context in which preschool classroom prosocial behavior was likely to occur. A second objective was to measure the prosocial acts of the children within all environmental settings. The prosocial behaviors were measured within child-chosen activities and within three different teacher-imposed activities. Analyses of teacher interviews, statistical data, and nonparticipant observations from the classroom’s real world experiences were the research methods employed for this study.

The experiences of the children at the Kidtown Child Development Center (KCDC) provided the data for the present study. The KCDC is located on the campus of a mid-sized southern university and served as a regional training facility for Head Start centers. KCDC was accredited by the National Association for the Education of Young Children (NAEYC) and employed the High Scope preschool curriculum. One methodological advantage the KCDC had over other preschools was the classroom’s observation booth. The observation booth allowed the research to be relatively easy to carry out unobtrusively.

Unobtrusive, nonparticipant observational methods and concepts have played an important role in the recent history of the social sciences. The use of sophisticated observational methods for studying the behavior of children is a similar methodology. Ethology is a search for innate patterns within behavior.
Ethological methods were first used with infants and preschoolers by Clark, Wyon, and Richards (1969), who studied free play in nursery schools in England, and Jones Blurton (1972), who published his research in *Ethological Studies of Child Behavior*. The use of an ethological method also allowed the research to progress without fear of the researcher’s presence being an influence.

It was necessary to observe the classroom over a period of time because social skill development is not an instant occurrence in children. The circumstance of interaction or trust with others does not happen at once, but as Piaget said: “[The child] is socialized as it adapts itself to the external physical environment” (Piaget 1962, p.294). George Herbert Mead suggested that human instincts come from the environment. Mead suggested that children do not come into contact directly with the physical world. Rather, the relationship occurs by means of experiences in the physical environment (Miller 1982, p.140). The present study takes the position that social interactions are a product of the physicality of space and the shared social definitions of the situations children are in.

The socialization process could also be called the process of acclimation to an environment, since the process of socialization involves adaptation to social norms, signs, symbols, and meanings for situations and settings. As mentioned previously, one of the objectives of this study was to demonstrate how classroom environments affect prosocial behavior. This concept is not original, for other researchers and theorists have addressed it. The present study is most similar to the work of Smith and Connoly (1980), entitled *The Ecology of Preschool*
Behavior, although in that study manipulation of the environment was used in various ways. The researchers, for example, rearranged the furniture in the classroom, reorganized materials on shelves and bulletin boards, and decreased and increased the size of the classroom’s square footage. For the present study the real world experiences of a preschool classroom provided the differing physical and social contexts for learning.

**Theoretical Perspective**

The amount of social skill development among 36- to 48-month-old children is enormous. According to cognitive development theory, intelligence develops as a result of the interaction of heredity and environment. Learning theorists (e.g., Bandura 1969) have maintained that children learn as a result of observing the consequences of the expectations in a learning model’s behavior rather than through the direct reinforcement of their own behavior. Bandura and Walters (1959) believe that children learn by observing the operation of a model even if they do not immediately imitate the model or are not directly reinforced. According to symbolic interactionist theorists, the self comes about through an interaction of the individual with the social world. As the child interacts with the world, a second resulting condition is the development of language. Simple sentences give way to a close approximation to adult speech. In a social mode the child moves from solitary play to cooperative play with several other children. During the preschool years gross and fine motor skills are developed along with the mastery of number, color, and shape concepts. Sex identity is established and with it the beginnings of awareness of societal sex roles. Symbolic
interactionism, cognitive development, and social learning were the theoretical perspectives of analysis for the present study. These theories were selected for their relevance to understanding the importance of the interaction of environment to the development and emergence of prosocial behavior among children. The present study recognized the social environment in which learning occurs as a significant factor in the socialization process. The environmental setting may be characterized as having two major components: 1) the physical environment (the tables, chairs, books, walls, and other things in the physical space in which the child grows and develops) and 2) the social environment (the people who interact with the child). Together, these provide the context for social development.

In early childhood the child’s social world is rapidly expanding; whereas social contacts in infancy are generally limited to the family and to brief encounters outside the home, the preschooler acquires neighborhood playmates, accompanies parents on trips outside the home, and may attend a day-care center. All of these events result in the preschooler’s interacting with an increasing number of peers and adults. In the preschool classroom, the teachers are simultaneously reinforcers and models for appropriate behaviors. Teachers are considered as a tool for society who enforce the expectations of society. It is in this relationship that the moral code emerges from a set of behavior norms or classroom rules, regulating the expression of the wishes, which is built up by successive definitions of the situation. Prosocial behavior is thus the generally accepted definition of the situation whether expressed in public opinion, in a formal legal code, or in classroom rules.
In this study, prosocial behaviors were defined as acts which are developmentally appropriate to the situation and demonstrated behaviors which are either sympathetic (compassionate concern), empathetic (verbal communication of similar feelings), or altruistic (unselfish concern for others), and/or language. Prosocial behaviors in this study were proactive—occurring without direct stimulus, or reactive—performed in response to a stimulus. For example, a proactive prosocial behavior could be a child offering to share materials with another child. An example of reactive prosocial behavior would be a child attending to the cries of another child. A behavior was also characterized to be positive or prosocial if, when generalized to most social situations, it would be expected to produce or maintain the physical and psychological well being and the integrity of the other person(s) involved. This kind of behavior demonstrates not only an awareness of the well being of the other person(s) but also a willingness to share, however briefly, their pain, frustration, and sorrow.

**Importance of Prosocial Behavior**

Today in the United States, many children participate in violent behavior. It would seem that at least once a week a new incidence of violence shows up on the television news. Children are exhibiting a more frequent use of antisocial behavior and the inability to recognize another person as a valued member of society. This phenomenon, when it occurs with children, must be explained as a negative social reaction to the environments responsible for instilling appropriate behavior.
Recent shootings in high school classrooms across the United States have further highlighted the importance of children needing a developed and healthy sense of self. The transmission of social and emotional skills such as sympathy, empathy, and altruism is one of the objectives of preschools. Prosocial behaviors are an outgrowth of social constructs established within the classrooms. Positive benefits of preschool social learning were as much a testimonial for the High Scope curriculum as for environmental influence upon prosocial behavior. A preschool classroom is only as effective as the curriculum. The proper implementation of the High Scope curriculum may allow children to interact in a healthy, safe, and nurturing atmosphere.

This research was conducted with the underlying belief that positive societal change can begin with the implementation of curricula, which reflect a holistic approach to the development of prosocial activity among preschool children. Educators, researchers, and social scientists have theorized about the socialization process. In the next chapter, the theoretical foundations for this study are presented.
CHAPTER II
THEORECTICAL PERSPECTIVE

Previous research demonstrates that preschoolers exhibit prosocial behaviors when they believe their action is expected or it is to be rewarded (Davis and Langone 1996, pp. 243-45; Farver and Branstetter 1994, pp. 337-41). However, another reason may be a combination of the cognitive development of the child and the setting in which the behavior takes place. To examine the prosocial behaviors within a preschool classroom several variables must be considered. Age, gender, temporal effect, and setting are four such variables used in this study.

The theoretical perspective for this study was derived from symbolic interactionism and a merging of cognitive development and social learning theories. The ideas of Thomas, Mead, Goffman, Piaget, Rotter, Bandura and Mischel are all found in this study. The similarity among these theorists is their central belief that behavior is a product of the interaction of social and environmental influences. Symbolic interactionism, cognitive development and social learning theory are popular theoretical approaches that have guided research on social interactions and the socialization process. In any one study these perspectives are almost always employed independently of each other. The present study recognizes that any of the three theories can be used to
investigate social interaction but finds that when used alone their explanatory power is limited.

**Symbolic Interactionism**

Symbolic interactionism deals with a subjective perspective that makes the point of view of the actor and his or her "definition of the situation" the central feature of the analysis of collective action (Thomas [1923] 1969). In this schema the individual's understanding of his or her situation is the basis of the explanation of ongoing group life. Furthermore, his or her ability to make decisions and to express preferences that are opposed to the requirements of any social system or the dimensions of social structure is needed to define the self within the group.

Symbolic interactionism emphasizes social process rather than social structure as the imagery appropriate to the study of ongoing human group life. Symbolic interactionism is concerned with the endless flow of experience and situation to understand the environment in which collective action is organized and arranged (Stryker 1980, p. 29). Experience and situation are of great importance when examining preschool children and their interpersonal relations, especially when considering motive as an element of social interaction. It is the past experiences and the present situation that guide children's behavior during social interaction. Children use their achievements and failures from previous situations to help them realize a course of action.

In symbolic interactionism one very important object of study is the self. The self is the kind of object that a person makes of himself or herself. This
process of identification is based on the way in which the actor has been treated by significant others, such as parents and teachers, as well as the way in which the actor interacts with others in a variety of situations. This interpretive effort underlies Erving Goffman’s (1959) suggestion that the self is on loan from society. Symbolic interactionism locates the process of collective definition (and the construction of collective action) in situations that have a history and that present the actor with opportunities and constraints. These situations are presumed to have an objective reality apart from the understanding of the actor or of the sociologist.

Another basic assumption of symbolic interactionism is that rather than acting instinctively, human beings manipulate symbols and through "minded behavior" (Stryker 1980, p. 26) or creative thinking the individuals interpret, define, and attach meaning to symbols in their environment. Symbolic interactionists’ theoretical accounts are developed on the pivotal principles of reciprocal effects between self and social interaction (Stryker 1980, p. 28). The present study examined the significance of context within prosocial interactions and exchanges. Thus, a more complete understanding of social interaction allowed for realistic conclusions.

Symbolic interactionism assumes that there are constructive mental processes in operation when actors act in their social environment. Symbolic interactionist theory implies that individuals imaginatively assume roles of others and view themselves in terms of the conceptions of others. In symbolic interactionist theory social organization is viewed as emerging from individually
constructed acts fitted to one another. They in turn give rise to institutional modes of behavior. Symbolic interactionism holds that social dynamics are conceived in dialectic terms, arising out of contradictions between micro and macro processes and inherent tendencies in social organization toward inconsistency, conflict, and change (Singelmann 1972, p. 420).

Symbolic interactionism recognizes that the genuine mark of an empirical science is to respect the nature of its empirical world—to fit its problems, its guiding procedures of inquiry, its techniques of study, its concepts, and its theories to that world. It believes that this determination of problems, concepts, research techniques, and theoretical schemes should be formulated by direct examination of the actual empirical social world. It would be preferable to working with a simulation of that world derived from a few scattered observations of it. Similarly undesirable would be working with a picture of that world fashioned in advance to meet the dictates of some scheme of “scientific” procedure or with a picture of the world built up from partial or untested accounts of that world (Blumer 1969, p.33). These principles guided the present thesis research.

Prosocial behaviors involve a willingness to share, however briefly, in the pain, frustration and sorrow of the other. In Mead’s view of the emergence of role-taking capacities, the self that arises gradually through a progressive widening of the scope of human involvement must never be conceived as a mere body. It is rather a social entity emerging in a social process of development from simple conversations or gestures to the process of identification with the “generalized other” (Miller 1982, p. 164).
Among George Herbert Mead’s most notable achievements was his account of the emergence of consciousness and the self through the gradually developing ability in childhood to take the role of the other and to visualize one’s own performance from the point of view of others. Human communication becomes possible only when imaging promotes in one’s self what it arouses in another person. Very young children do not yet have the ability to use significant symbols; therefore, when they are at play, their behavior in many ways is similar to that of puppies playing with each other. As children grow older, however, they gradually learn to take the role of others through play. A child plays at being a mother, at being a teacher, at being a policeman; that is, he or she is taking different roles. The growing child who playfully assumes these roles thereby cultivates in himself or herself the ability to put himself or herself in the place of others who are significant. As children mature, they will not only be able to take these roles by acting them out but also will conceive them by assuming them in their imagination (Miller 1982, p. 124).

Child play at the level of simple role-taking is the first stage in the gradual transformation from simple conversations in gestures—a child’s running away when chased—to the mature ability to use significant symbols in interaction with many others (Miller 1982, p. 221). Although in their imagination children have learned to put themselves in the position of their partners, children still do not relate in their mind the roles that several others play with one another. Thus, the child can relate his or her mother or father with himself or herself but cannot understand that one’s own mother is not his or her father’s mother also. A
breakthrough in children’s conceptualization comes with their ability to play complex organized games, when they will have in their mind all the roles of other players and make assessments about their potential responses to one another. Such games must be distinguished from simple games such as hide-and-seek, which involve only two types of role partners, or playing jacks, in which the actors do not modify each other’s play and, hence, do not have to anticipate the response of the other partner (Miller 1982, p. 230).

The fundamental difference between the complex game and the play is that in the complex game children must have the attitude of everyone else involved in that game. The attitudes of the other players, which the participant assumes, organize into a sort of unit, and it is that organization that controls the response of the individual. In a game each individual act by children is determined by their assumption of the acts by the others who are playing the game. We get, then, an “other,” which is a collection of the attitudes of those involved in the process (Mead [1934] 1962; Miller 1982, p. 242).

The difference between play and games resides in the number of participants and in the existence or absence of rules. Play undertaken by one child has no rules. Games have rules but differ as to the number of players. Two-person games require simple role taking; multiple person games require taking the role of the “generalized other”; that is, each player has an idea of the behavior of every other player toward each other and toward himself or herself. With the help of the rules that govern the game, the child develops the ability to take the place of all the other players and to determine their responses. These
“rules are the set of responses that a particular attitude calls out.” The final stage in the maturation process of the child, Mead argues, occurs when the individual takes the role of the “generalized other,” the attitude of the whole community (Miller 1982, p. 244).

The fully mature individual, according to Mead, does not merely take into account the attitudes of the “significant other” toward himself and toward one another. The person must also take their attitudes toward the various phases or aspects of the common social activity in which, as members—of an organized society or social group, they are all engaged. Through rules the child is introduced to societal compulsion and the abrasive texture of a more nearly adult reality. (Mead [1934] 1962, p. 97)

Hence, the mature self arises when a “generalized other” is internalized so that society has control over the behavior of its members (Ballis 1995, p. 437).

The essence of the self, according to Mead, is its reflexivity. The individual self is individual only because of its relation to others. Through the individual’s ability to take into his or her imagination the attitudes of others, his or her self becomes an object of his own reflection. The self as both subject and object is the essence of being social. The peculiar individuality of each self is a result of the peculiar combination, never the same for two people, of the attitude of others that form the generalized other. Hence, although individuality is rooted in sociality, each person makes an individual contribution to the social process (Miller 1982, p. 67).
Cognitive Development Theory

Proponents of cognitive development theory view humans as active agents who play a major role in their own development. Development, itself, is seen as a self-constructive process by which we organize our conceptions of the environment. Development does not flow smoothly, step by step, but rather comes in surges or spurts. Each of these developments is uniquely different from all others.

According to cognitive development theory, humans are basically intellectual and rational beings. Fundamental to development is a process of adaptation as human beings seek either to adjust and structure their world in accordance with their individual conceptions of it or to alter their world in light of their experiences. Commonalities of development are stressed, and variations are explained either as tempo differences in development or as a function of the interaction of the environment with the organism's characteristics.

A major contributor to the understanding of the cognitive development of children was Jean Piaget. For many years Piaget studied how children developed knowledge, that is, how they think and reason. Typically researchers have studied children's intelligence by measuring the number of correct answers from a test. Piaget ([1932] 1948) was interested in the process of thinking and reasoning that a child uses in answering questions and solving problems, rather than simply in whether or not the child gives the correct answer.

Piaget ([1932] 1948) found in his testing that children at various levels of development gave different types of answers to the same questions. Differences
in answers were due to differences in the child’s reasoning and thinking processes.

Piaget (1962) identified four major stages or levels of cognitive development, and all children go through at least the first three stages. The order of the stages is the same but the rate at which children enter a stage may vary. The stages are as follows (the chronological age spans given for each stage are norms): sensorimotor stage (0-2 years), preoperational stage (18 months-7 years), concrete-operational stage (6-12 years), and formal-operational stage (12 years to adulthood). The present research will focus on the sensorimotor and preoperational stages.

The sensorimotor stage is accepted as the first stage in cognitive-development theory. During the sensorimotor stage children are responding to stimuli through reflexes (e.g., sucking and crying). They “know” objects by the action they can perform with them. This early learning through action is often seen in language. Ask a child what a mommy is, and he or she will often define the word in terms of what a mother does rather than in terms of the biological relationship (Peters and Willis 1978, p. 145).

Because young children acquire much of their early knowledge about the world through action, they have very limited cognitive ability (Piaget [1932] (1948), p. 87). Thinking and knowing in terms of actions limits children to comprehending only the here and now. Signs, symbols, and meanings for objects and events must develop for young children’s thinking to extend. Through imitation, children develop a means of representing or symbolizing their
thoughts and desires and of communicating what they are learning about the world (Peters and Willis 1978, p. 148).

Imitation is one of the first forms of representation developed by young children. Research (Ainsworth 1973) indicates that children imitate adults as early as the first ten days of life. What begins as a game, such as hand clapping between a parent and a child, soon develops into a child imitating actions he or she cannot see or actions that he or she has not done before. This development of imitation leads to “internal imitations” (Peters and Willis 1978, p. 227), which is adapting the ideas, beliefs, or views that others have exhibited around the child.

The second stage in cognitive development theory is the preoperational stage. This term comes from Piaget’s idea that young children’s thoughts are mostly egocentric and lack reversibility. In saying children’s thoughts are ego centered, Piaget means that when children are attending to an object or an event, they have difficulty being aware of more than one aspect of that object or event at a time. Piaget also believed that children’s thinking in the preoperational stage is egocentric. This concept does not say children are selfish but that they think that every other child thinks, sees, and feels the way they do.

The third characteristic of the preoperational child’s thinking is a lack of reversibility in thinking. Young children have a difficulty in reversing their thinking; they focus on the last event in a series of actions. Failing to take into account the entire sequence of events can lead children to faulty conclusions.

Although Piaget is best known for his theories of cognitive development, many of his writings contain references to the significance of social influences.
Piaget (1950, p. 156) states, “The human being is immersed right from birth in a social environment which affects him as much as his physical environment.”

**Social Learning Theory**

Social learning theory (sometimes referred to as modeling, observational learning, or vicarious learning) includes elements of operant conditioning and social cognition. The origin of social learning theory is found in personality theory, specifically Julian Rotter’s desire to explain individual variation in behavior without referring to psychodynamic models (Rotter 1954). Rotter assumed that behavior is goal directed. He also assumed that behavior emphasized expectations of reward and perceived values of rewards as the basis for modeling one’s behavior on that of others. Rewards for desired behavior are presumed to reinforce that behavior. This position contains an assumption that operant theorists may recognize as similar to operant conditioning. The importance of adding the assumption of expectancies in social learning, however, is that one behavior can be chosen over another or increased in frequency or intensity without direct reinforcement (Rotter 1954, p. 192).

Bandura and Walter’s 1959 study of adolescent aggression supported the theory that social behaviors are learned by example. In their study children watched a man aggressively hitting and punching a BoBo doll. Later, the same children were placed in a room with a BoBo doll and were observed duplicating the man’s actions. To demonstrate the influence of viewing social behaviors prior to being in social situations the researchers used the BoBo doll and other manipulations.
Social learning theory has focused less on the cognitive abilities of the child and more on the role of the environment in explaining socialization. This theory maintains that children learn appropriate behaviors through reinforcement and through observing the behaviors of others. Children can receive reinforcement in three ways: 1) they can be directly reinforced by other persons or events; 2) they can be reinforced vicariously by observing the behavior and consequences of others; 3) they can reward themselves. Supporters of social learning have generally emphasized the importance of vicarious reinforcement as more deterministic.

**Synthesis of Theories**

Peoples’ understanding of objects and setting develop through a process of interpretation. During such interpretation individuals take into account the relevant objects in the situation they confront, including the activities of others, the anticipated activities of others, conventional definitions of the situation, past experience, goals, interests, and values. What individuals take into account and how they construct their activity in connection with real or imaginary others can never be predicted but is always subject to change or the possibility of change. There are many important sources of change in this respect such as mobility and a change of location that occur in going away to school in a different city or in migrating to a new country. A second source of change is lodged in the actor’s capacity to think or what (Mead [1934] 1962, p. 168) called “an internal conversation of gestures.” Because individuals are able to think, they can always put the meanings of objects together in new ways and design new lines of action,
even over and against the prevailing meaning of a particular group (Mead [1934] 1962, p. 171).

The combination of symbolic interactionism, cognitive development, and social learning theories provides a foundation that partially accounts for the individual, physiological and environmental determinants of behavior. The linking characteristic of these three theories is the individual. The individual is a fundamental key to the adaptation of social norms. When people learn of others' experiences and adapt their behavior when they are in a similar situation, they essentially are imitating the behavior of others and adapting the meaning of a given situation.

Symbolic interactionism, cognitive development, and social learning theories each value the individual. Each theory supports the position that people are active participants in their world. The synthesis of these theories supports a position that social behavior is a result of developmental abilities, experience, and understanding. Each of these aspects of the models for designing theories provides important and relevant information. These theories do not suggest a strict mathematical formula for socialization. Rather, they serve as a guideline for a child’s social development. The following chapter presents recent studies and research on preschool socialization and addresses the influence of external factors such as environment, age, gender, and peer relationships.
CHAPTER III
LITERATURE REVIEW

The structure of children's groups has become a more significant topic of study due to the importance play groups have in children's social development. It is possible to examine the social characteristics of groups and the individuals within those groups to gain a clearer understanding of how groups help to shape the individual and vice versa. In an attempt to study the perception of prosocial behavior by preschool children, preschoolers have been shown pictures that depicted prosocial and antisocial actions and were asked to classify each as good things to do or bad things to do. The results show more consensuses on antisocial behavior than on prosocial behavior (Naparstek 1990; Warden and Lowe 1997). These findings illustrate that children may comprehend negative behaviors more readily than they do positive behaviors. An explanation for this sequence in awareness may be that parents, teachers, and authority figures often stress what one should not do and fail to provide positive reinforcement for appropriate behaviors.

Prosocial behaviors among preschool children with and without disabilities have also been explored. The findings of previous research suggest that positive interactions among children with disabilities are equal to or greater than among children without disabilities. Previous research also indicates that increases in
positive social responses to positive social interactions are similar for disabled
and nondisabled children (Davis and Langone 1996).

**Benefits of Preschool Attendance**

Attending preschool has long-term benefits for many individuals and for
society as a whole. Research evidence on achievement indicates that while 71
percent of former preschool attendees have graduated from high schools or
attained the GED (General Education Development) certificate, only 54 percent
of children that have no preschool experience have graduated or earned a GED
(Doescher and Sugawara 1989, p. 215). Other evidence shows that females
who have attended preschool graduate from high school at a much higher rate
than do females who have not attended preschool (84% versus 35%). However,
previous evidence on high school graduation rates for males indicates that males
who attended preschool were slightly less likely to graduate from high school
than were males who did not attend (Bracey 1994, p. 417). A possible
explanation for these results could be the influence of peers during adolescence
and the greater effects of gender differences in school effects. The power of
persuasion and the desire to fit in with peers may be weighted differently for
males (Bracey 1994, p. 418).

Teachers and caregivers through a variety of means can encourage
prosocial behavior in young children. Discussion of others’ thoughts and feelings
that are different from their own can help children express their thoughts and
feelings to others. Room arrangement, availability of supplies, and a curriculum
that emphasizes sharing have all been shown to promote cooperative play and,
consequently, more prosocial interactions. Above all, modeling appropriate behavior is essential for eliciting prosocial responses in children (Doescher and Sugawara 1989, p. 215).

**Influence of Environment**

The effects of environmental manipulation on preschool children have been studied. In a 1980 study Smith and Connolly examined a variety of environmental conditions. Some of their analyses compared the behavioral effects of crowding, the number of children in a group, the size of play space, and structured and child-chosen activities. Their results showed that in larger groups there were more same-sex pairings of children. However, the overall size of the group did not affect social interaction. Smith and Connolly found that younger children (less than four years) participated in more parallel play. Older children engaged in more group play (Smith and Connolly 1980, p. 130).

The researchers found that boys and girls reacted similarly to the manipulations of environmental size and size of play group. In structured and child-chosen play, Smith and Connolly (1980, p. 293) observed girls’ behaviors decreasing during table toy play sessions. They also investigated the difference between structured (teacher-imposed) and free-play (child-chosen) for preschool classrooms. One group of students received more structured activities and the other group had more free-play sessions. Findings indicated that the presence of a teacher caused the children’s interactions with other children to decrease while adult to child interactions increased (Smith and Connolly 1980, p. 316).
Influence of Gender

The types of studies that have been conducted in recent years point to gender differences among preschooler’s social interactions. Findings reveal that boys engage in more reactive prosocial behavior (attending to others in distress) than do girls (Doescher and Sugawara 1989, p. 215). A possible explanation for these results may be found by examining the attraction styles of children. Young girls often play in cooperative groups in which each member has a role (pretending to be sisters looking for a friend). On the other hand, boys often center their play around tangible goals, for example, running faster than peers or building a block tower higher than before. This competitive aspect of boys’ play may be a logical extension of how men interact with the world (Doescher and Sugawara 1989, p. 216).

Gender differences in emotional expressiveness and empathy have been found in children by measuring facial and verbal responses to emotionally evocative videotapes and by ratings from caregivers (Roberts and Strayer 1996, p. 456). Prosocial behaviors have been assessed by laboratory tasks and by ratings from parents, best friends, and teachers. Results indicate that emotional expressiveness, emotional insight, and role taking are predictors of latent empathy and girls’ preferential use of words over force. Boys’ empathy is a strong predictor of prosocial behavior. In contrast, girls’ empathy is related to prosocial behaviors with friends but not to cooperation with peers (Roberts and Strayer 1996, p. 458).
Influence of Age

Prosocial behavior appears to develop simultaneously with other social and cognitive behaviors (e.g., temporal relations, language, and self identity). Many theorists suggest imitation, consistency, and positive reinforcement as factors that instill proactive and reactive prosocial behaviors in children less than five years of age (Doescher and Sugawara 1989; Young and Stevens 1987).

A Piagetian explanation for the development of prosocial behavior in children indicates that, with increasing age, children become more aware of prosocial acts (i.e., their perceived behavior by others) in terms of gain (approval) rather than cost (disapproval). Longitudinal data from an earlier study suggest that this tendency changes in the direction of higher levels (i.e., from cost perception to gain construction) (Lourenco 1993, p. 97). These findings further strengthen the correlation between the passage of time (exposure) and adapting the norms that benefit others. The ability to comprehend a greater good (i.e., the welfare of another) normally occurs during the first sixty months of children’s lives.

Prosocial behavior often entails a sacrifice by the helper that may range from minor inconveniences to significant social, economic, and physical costs. Helping behaviors are more likely to occur when potential helpers are made aware of the consequences of their helping or not helping. Helping behaviors are also likely to increase when children feel personally responsible to help in specific situations (Johnson 1992, p. 442). Various aspects of helping behavior suggest two primary motives.
The first of these is “awareness of consequences,” and the second is “ascription of responsibility.” Both of the motives can be observed in preschool classrooms (Johnson 1992, p. 442). The awareness of consequences reveals itself in a variety of ways. One example occurs when children voice their concern about others engaging in potentially dangerous behavior. Children demonstrate that they are aware of the impact of their actions on another when they inform on others’ inappropriate behavior. Children show awareness of responsibility when they are able to express their position or expected position in any given situation (Warden and Lowe 1997, p. 369). When children take on the role of a particular other, they adhere to a societal guideline for behavior. Preschool children can communicate which types of behaviors are considered acceptable in given situations; however, the experiences of the children are what shape the archetypes used for their definition of the situation. Younger children (36-48 months of age) may portray the other in broader generalizations than children over four years old (Warden and Lowe 1997, p. 374).

The matrix of preschool, social-interaction knowledge is divided along the lines of academic disciplines. Sociologists may focus on the reasons for interactions, psychologists may concentrate on presence of individualism, and educators might emphasize the structure and content of the classroom. Preschool children’s social interactions may follow this format; therefore, to study a specific behavior in children’s social interaction is to study the relationship with the environment as well. Because young children struggle with the boundaries of
social interaction, this study intends to focus on the influence of the learning environment and the frequency of prosocial behavior.

**Peer Relationships**

Even in infancy and toddlerhood prosocial understanding varies depending upon proximity, recognition, body language, availability, voice tone, odor, and other factors (Eisenberg, Fabes, Miller, and Fultz 1989, p. 58). Within any group peers will approach some children while others may be ignored. Because children reciprocate the behaviors that they experience, it is important that they be with peers with whom relationships are harmonious (Dodge 1987, p. 28). Children must have opportunity to practice prosocial behavior, and such behavior needs to be valued by others. Discussion of others’ feelings, modeling positive behaviors, and reinforcement of appropriate behaviors are critically important for prosocial acts to develop in young children (Dodge 1987, p. 29).

Children are attracted to other children on the basis of their friendliness, cooperativeness, and their social competence as well as for their kindness and helpfulness (Dekovic and Jansens 1992, p. 927). High rapport with peers forms the foundation for positive relationships. Trust, security, and safety are concepts that have great importance in children’s lives. Children present their true selves in places where they are welcome, as do adults.

Sociability, cooperation, and mutuality generally mark children’s friendships so friendship experiences may promote altruistic behavior. Preschool aged children who have popular and unpopular friends are more responsive and reciprocal in their dealings with others than are children who do not have friends
Children express more sympathy in response to a friend's distress than to that of an acquaintance and are more motivated to relieve the distress of their friends (Costin and Jones 1992, p. 945). Because children select one another on the basis of similarities between those people and themselves, the altruistic patterns may or may not reflect socialization effects. They may reflect the natural patterns of self-selecting one's playmates. It is for this reason that amount of time in a classroom should be examined for its socialization effect.

It is necessary to promote chiefly prosocial behavior and obviously to avoid aggressive or antisocial behavior. Disruptive preschoolers continue their antisocial behavior when they begin kindergarten (Ramsey, Patterson, and Walker 1990, p. 217). Other children dislike them as much for their deviant and disruptive behavior as for fighting (Dekovic and Jansens 1992, p. 930). Developmental dynamics vary from child to child, and many aggressive children are not rejected and many rejected children are not aggressive (Cillesseen, van Ijzendoorn, Lieshout, and Hartup 1992, p. 899). Nevertheless, children who are both aggressive and rejected are more likely to continue toward delinquency and externalizing behavior than are children who are one or the other (Coie and Lenox 1994, p. 57). Thus, studying preschool socialization is an important first step in understanding externalized violence.

Prosocial behavior typically emerges during the second year of life. Two-year-old's empathic (proactive) concerns are weak but reactive prosocial behaviors have been shown more consistently at a younger age in preschool groups. The most stable and frequent empathic reactions occur when a peer
confronts a child causing distress to another. Giving assistance, in contrast, is more stable when distress is witnessed than when the child causes it. These findings are based on a play group’s reactions to simulated distress at 14 to 20 months, promoting the hypothesis that perception of distress can be supplied by others proximally (Zahn-Waxler and Robinson 1992; Zahn-Waxler, Radke Yarrow, Wagner, and Chapman 1992).

Summary

Previous research on the preschool socialization process clearly shows that children’s behavior develops due to a combination of factors. Age, gender, and peer relationships are only a few of the variables that have been correlated with behavior development. Research has shown that more emphasis is generally placed on controlling for antisocial behaviors than praise for accepted behaviors. This practice of acknowledging negative behavior over positive interaction impresses upon young children that negative behavior receives more attention than helping behavior. This idea touches on the theoretical explanations for behavior as defined by symbolic interactionsist, cognitive development, and social learning theorists. These three theories support the belief that children behave in ways that others expect of them. Children base their behaviors within interactions upon the value(s) of the situation and their attitude towards the other participant(s). The next chapter outlines the method of research used for this study of how various types of preschool learning may help develop all types of prosocial behavior, not just children’s awareness of proscriptive action.
CHAPTER IV
RESEARCH METHODS

The present study incorporated two methods of research: observation and interviews. The combination of qualitative and quantitative research methods provided the study with a more thorough means of data gathering. Data gathering and data analysis were designed to answer four questions: 1) How does gender relate to behavior differences? 2) How does age influence prosocial behavior? 3) Do child-chosen activity sessions produce more prosocial behaviors than teacher-imposed activity sessions: and 4) Do prosocial behaviors increase in frequency over time?

Behavioral Variables

The researcher recorded the observational data, and individual acts of prosocial behavior were coded according to the behavior checklist. This composite checklist was developed by the researcher in order to reflect the behavioral and developmental assessment tools used by Head Start, The National Association for the Education of Young Children, and the High Scope preschool curriculum. These three developers of educational materials use behavioral evaluation checklists in their respective programs. The objective in developing these checklists was to assist teachers and parents with the
developmental progress of children. Cognitive, social, emotional, physical, and language skills are the areas rated by the teachers.

Each learning center's objective is to encourage active learning by the child. Active learning is developed through the use of a variety of materials and environments which are aesthetically and developmentally appropriate. Active learning allows children to create their own play and to interact within the social world. This process of interaction is conducted initially with their own definition of the situation. Active learning encourages children to explore their world using all of their senses.

The developmental assessments are conducted as to reflect each child’s abilities and not to position their scores on a comparative chart. Active learning supports the position that social development evolves at different rates for all children. The decreased emphasis on chronological stage achievement is reflected by the higher concern for development of self. Self perception (self esteem) has been shown to be significantly related to several aspects of socialization. Children with positive self images interact within a wide range of expectations. Some of these expectations are prosocial behaviors.

The instrument for the present study was created using several of the behaviors listed in other assessment tools. The general types of behaviors (a full checklist appears in appendix A) that were counted for the analyses were classified into four major categories.

1) **Prosocial Acts for Self** were acts that consisted of a child showing respect for other children's choices of play or providing positive comments about
choices of play or providing positive comments about choices made by peers; problem solving involving attempts to work out tasks independently; talking with other children; making eye contact when talking to another child; using positive nonverbal messages with peers such as holding hands, hugging, or smiling; taking turns when talking with another child, not interrupting, or allowing others to finish talking.

2) Prosocial Acts of Language were acts in which a child would verbally and prosocially respond to verbal messages from another child nonverbally and prosocially; respond to verbal messages from another child verbally and prosocially; respond to nonverbal messages from another child nonverbally; and prosocially respond to nonverbal messages from another child.

3) Prosocial Acts for Interaction were acts that demonstrated sensitivity to others’ feelings; respected “no” from peers or did not force peers to do something they did not want to do; expressed feelings in words, used angry, mad, sad, happy, or the like to convey their own mental states; found alternatives to conflict with others, suggesting compromise or engaging in cooperative play; and shared during episodes of shortages.

4) Prosocial Acts of Concern were acts in which a child was seen responding prosocially to cries/pleas of another with vocal recognition of the other in distress; comforting other children after the fact; attending prosocially to cries/pleas of other; or commenting on behavior of others when potentially dangerous.
Contextual Variables

The environmental concepts of preschool group interactions on prosocial performances were studied. The prosocial behaviors were observed and analyzed in terms of context and frequency within seven different classroom environments. The data in the study are based on observations of children in six teacher-imposed “group” activity sessions and twenty-four child-chosen “free play” sessions. The large group activity sessions observed consisted of two painting sessions, two story-telling sessions, and two gross-motor activity sessions.

In this study four learning centers were used in the measurement of child-chosen “free play”: They were the House, Table Toy, Art, and Computer Centers. These centers represent two distinct types of play: imaginative (house and table toy) and cognitive (art and computer) play. The children’s free play involved each child making a plan to play in a specific center (House, Table Toy, Art or Computer). These sessions were observed over a nine-week period at the KidTown Child Development Center (KCDC) beginning on June 8, 1999 and ending August 6, 1999.

The KCDC is located on the campus of a mid-sized southern university. The KCDC serves as a training facility for Head Start centers in a seven-state region in the Southeast. The National Association accredits KCDC for the Education of Young Children. The High Scope preschool curriculum was employed at the center. This curriculum was a contributing factor to the environment of the center. The classroom daily routines were structured around
the five basic principles of the curriculum. These principles were positive adult-child interactions, a consistent daily routine, a team-based daily child assessment, active learning, and a child friendly learning environment. Because the physical setting impacted the behavior of adults and children, the High Scope curriculum strongly emphasized the layout of the center and selection of appropriate materials. An active learning environment provided children with ongoing opportunities to make choices and decisions.

Adults organized play space into specific interest areas or learning environments. These areas contained a wide and plentiful assortment of easily accessible materials children could choose and use to carry out their intentions and ideas for play. Adults arranged storage for materials using low shelves, clear boxes, and picture labels children could “read,” so all children could independently find, use, and return the items they needed.

**History of High Scope**

The curriculum referred to as High Scope was originally developed from a study done in 1962 of at-risk preschool children, ages three and four in the Ypsilanti, Michigan area. David P. Weikart began this study to determine why these children did not perform well on academic achievement or on intelligence tests during high school. Weikart determined the low scores on these types of tests were a result of a lack of opportunities for the appropriate learning preparation for the school environment and not a true lack of basic intelligence (Hohmann and Weikart 1995, p. 17). This study used two groups; one enrolled in Weikart's preschool project with 3 and 4 years olds from this at-risk low-income
population of Ypsilanti, Michigan. The other group remained at home and received no interventions. In 1962-63, in what became known as the Perry County Preschool, the research formulated the philosophy upon which the High Scope curriculum was established (Hohmann and Weikart 1995, p. 17).

The theoretical beliefs of Jean Piaget and John Dewey were used to form the theoretical perspective. Piaget's cognitive-developmental work, as reported by Hohmann and Weikart (1995, p. 15), established the need for a flexible, open-framework operational model that supported appropriate education in diverse settings. This cognitive-developmental philosophy of learning states it is a process in which children act and interact with the immediate world to construct an increasingly elaborate concept of reality. Through experience children form incomplete ideas that may lead to contradictory conclusions; the process of resolving these contradictions leads to an increasingly complex thinking and learning (Hohmann and Weikart 1995, p. 16).

Within each of the classroom learning centers the general educational objectives were the same. The daily routine represented the basis for implementing each day's experiences for active learning. The child-chosen playtime provided the opportunity for the children to build on and strengthen their natural interests and their capacity for initiative and problem solving skills. Through the use of learning centers with a variety of materials, children could choose activities and expand upon previous ways of interacting with the materials, other children, and adults in the environment. Small group time or teacher-imposed sessions served to build a sense of community and to build a
repertoire of common experience. The learning centers specified in this study are identified as the House Center, Table Toy Center, Art Center, and the Computer Center.

1) The House Center included a child-sized play stove, sink, table, and chairs. Other house center items included baby dolls, baby beds, and child-sized dress up clothes stacked on shelves enclosing three sides of this center. Plates, cups, utensils, and plastic play food further encouraged more imaginative play.

2) The Table Toy Center consisted of a long rectangular table, which could seat eight children. Six was the maximum number of children allowed in this center at one time. Children shared in play with puzzles, blocks, cars, and other manipulatives for fine motor development,

3) The Art Center consisted of two rectangular eight-person tables. Twelve was the participation limit for the coloring, painting, and drawing. This highly visited center was primarily responsible for the artwork found throughout the center. The Art Center was regularly associated with episodes of problem solving and sharing as supplies were selectively limited in a general effort by the teachers to encourage sharing behaviors.

4) The Computer Center consisted of a table with three seats and an egg timer on top of the monitor so the children could time their turns. Software available for the children to use included several alphabet and number learning programs as well as some reading and math applications appropriate for five-year-old children.
Children Observed

The children in the classroom observed were between thirty-six and sixty-four months of age. The classroom had twenty-three children and four teachers. The four regular teachers were joined for the summer session by four student interns, a summer youth worker, and a foster grandmother. This situation created an unusually small child to teacher ratio. The class was comprised of thirteen children over forty-eight months of age and ten children between thirty-six and forty-eight months of age. Fourteen were female, and nine were male. Twelve children were from two-parent homes and eleven families reported earning less than $30,000 a year. The observed group had been together at the center for more than four months, with the last child joining the group eighteen weeks prior to the start date of this study. Twelve of the children had spent the past year together, while six children had been classmates for two years. The result of this lengthy exposure to the classroom’s written and unwritten rules was evident by the low rates of inappropriate behavior and physically aggressive behavior among children. These two conditions provided an atmosphere where prosocial acts of concern were more often performed in response to accidents rather than confrontation.

Classroom Teachers

The teachers at the Kidtown Child Development Center were four women ranging in age from 23-34. Carol, the lead teacher, held a master’s degree in early childhood education and had been a teacher at the center for three years. Shelly had been teaching for four years and had a bachelor’s degree in
elementary education. Tonya had taught at KCDC for six years and was a part-time undergraduate studying psychology. Rachael was a senior in college and had taught at the center for two years prior to the study.

**Observations**

Observations were conducted unobtrusively (via an observation booth with a one-way mirror) in order to reduce behavioral reactions to the observer. The researcher informed all parents, teachers, and the KCDC administration of research objectives and obtained their consent to conduct the research. All names used in the paper were replaced by pseudonyms in order to maintain anonymity.

To avoid any time-related bias in activity observed, observations were completed randomly for three days a week for nine weeks (May through August). The selection of which days to observe was determined through the use of a random number table (Singleton, Straits, and Straits 1993, p. 145). The observations included in the analyses were twenty-four sessions of child-chosen activities, and six teacher-imposed sessions. Both teacher-imposed and child-chosen activities were observed for 45 minutes per session.

**Reliability and Validity**

For purposes of this research, reliability was obtained by using a checklist with precise operational definitions of prosocial behavior. The checklist reflected assessment tools used by Head Start, The National Association for the Education of Young Children (NAEYC), and High Scope a curriculum designed for preschool classrooms. The specific behaviors' operational definitions are the
same as detailed in the evaluation and competency scales used by teachers, supervisors, and trainers for Head Start and the NAEYC.

Because this research derives from a systematic observation, intercoder reliability was checked. All four teachers used the behavior checklist one time prior to the observation period. Due to the classrooms' needs, each teacher observed a different session with the researcher. For all four sessions the level of agreement averaged over 90 percent. This evidence of inter-coder reliability was further revealed by the consistency between each child's per session sum of acts throughout the study.

Validity is based on the logical relationships found among the variables (Babbie 1995, p. 124). One logical expectation of prosocial behavior among preschoolers is that girls would engage in more prosocial acts than the boys, and older children would perform more prosocial acts than younger. Triangulating the researcher's observational journal, interviews with classroom teachers, and the behavioral checklist's empirical data assessed construct validity of the data. In all three cases the expected patterns of prosocial behavior were found to vary in the expected direction. These results suggest that all three methods obtained valid results. The validity of this study was also strengthened by the consistency found throughout the day with the children's behavior. For example, the classroom teachers did not have to break up any arguments or fighting in areas not included in the study (e.g., the hallways, restrooms, or playground).

Teachers as per classroom procedure documented every act of prosocial behavior that involved a child showing concern or giving aid to a child in distress.
These episodes were also seen in the researcher’s journal and on the behavioral checklists for the child. The observed prosocial acts were compared to classroom teacher’s and student intern’s assessments of each child’s social and emotional development. These ratings were also documented by anecdotal notes and were found to be in agreement with the researcher’s data.

**Data Analyses**

There are limitations and biases inherent in each of the main approaches of research, (experiments, surveys, interview, field research, and research using available data). This study combined three research methods in an effort to maximize confidence in the results. This approach is known as triangulation. In social research, the logic of triangulation applies to situations in which two or more dissimilar measuring instruments are used. The key to triangulation is the use of dissimilar methods, which do not share the same potential errors and biases. For this research interviews, observation, and statistical data were combined to produce the results. The observations and/or scores produced by each method will ordinarily contain error. If the pattern of error varies, as it should with different methods, and if these methods independently produce, or “zero in” on the same findings, then confidence in the results increases.

For the present study the combined advantages of observation, interviews, and statistical data virtually eliminate the disadvantages associated with any of the three. The insight gained by understanding the context of situations plus the tests of significance, which show real differences among
groups, provided this study with a more precise discovery of the socialization process.

**Statistical Analyses**

The checklist data were analyzed using the Mann Whitney U test of means for independent samples and the Wilcoxon Signed Ranks test for paired samples. Both of these tests are recognized as nonparametric tests of significance (Gravetter and Wallnau 2000, p. 640). The advantage of these tests over others available is their specific design for small sample sizes (less than 100).

The Mann Whitney U test is an alternative to the independent -measures t-test. The Mann Whitney U does not require homogeneity of variance or normal distributions, (Gravetter and Wallnau 2000, p. 640) and is, therefore, appropriate for the data in this study. The U-test does require independent observations, and it assumes the dependent variable is continuous. The Wilcoxon Signed Ranks test is designed to evaluate the differences between two treatments, using the data from a repeated-measures study (Gravetter and Wallnau 2000, p. 641). These conditions were met in this study and the small sample size makes the Mann Whitney U and Wilcoxon Signed Ranks two appropriate tests.

**Hypotheses**

The four hypotheses tested with the data gathered during this research were:

1) Girls are expected to display more prosocial acts than are boys regardless of learning center.
2) Children over 48 months of age are expected to demonstrate more prosocial behaviors across all learning centers than are younger children (36-48 months).

3) The child-chosen activity sessions are expected to have more observed acts of prosocial behavior than teacher-imposed sessions.

4) In each learning center the number of prosocial acts is expected to increase as the number of observed sessions increases.

The predictions of the classroom teachers and the researcher's field notes are presented with the statistical results in the following chapter.
CHAPTER V
RESULTS

Chapter V contains the analyses of data gathered from the prosocial behavior checklist, from interviews with classroom teachers, and from excerpts from the researcher’s field notes. The data produced an archive of social behavior across situations and over repeated occasions, allowing the researcher to investigate the natural organization of the children’s behavior without any reliance on self-reports and tester-created situations. The observational findings, teacher predictions, and results of the hypotheses testing are described in the following sections. The outcome for each of the four child-chosen learning centers and the three teacher-imposed activities are included.

First Hypothesis

The first hypothesis for the study was that girls were expected to perform prosocial behaviors more often than boys. The girls outperformed the boys within all seven environments. Results from the data indicate that the girls significantly outperformed the boys in four of the seven environments.

Results in the House Center

The children’s original scores regarding behavior in the House Center measured in acts were rank ordered, and a Mann Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results
indicated that there was significant difference (U=13.5, p<.05), with the sum of ranks equal to 218 for the girls and 58 for the boys. The total prosocial acts observed among the girls over six sessions were 1,979 with a mean of 141 acts per child. The boys were observed performing 920 acts with a mean of 102 each during the same period in the House Center. Thus, the hypothesis is accepted for the House center.

Prior to any observations, the classroom teachers were interviewed. They were asked “Who do you think will exhibit more prosocial behaviors in the House Center, the girls or the boys?” The teachers unanimously predicted that the girls would have higher scores. Tonya, a classroom teacher, said, “I think the girls are nicer to each other. The boys always seem to be so competitive.” Carol, the lead teacher, explained why she thought the girls would be more prosocial in the House center.

The girls really play together in the house center. I mean they act out family scenes and use a lot more dialogue in their play than the boys. The girls hang on to each other more than the boys. They (the girls) hold hands, hug, and jump around together. The boys talk to each other and look at each other’s face, but they aren’t as touchy as the girls.

The researcher also observed the girls performing more prosocial acts than the boys in the House center. The girls’ play involved more descriptive detail in their characters than the boys’. The girls were seen using more props in their play. While playing “house” the girls incorporated cups, plates, dress-up clothes, dolls, and an imaginary vacuum cleaner. Girls adapted different tone and pitch when speaking in character. The older girls would use a noticeably softer and
higher register when speaking as a “mother.” When the same girls would direct others in the play, their voices would return to a normal pitch.

The girls were also observed using positive nonverbal communication more often than boys in the House Center. The girls incorporated hugging and hand holding throughout their sessions of “playing house.” While the boys were not observed hugging, they would verbally praise one another and pat each other on the shoulders. Another difference between the genders in the House Center was the girls’ utilization of expressive language. The girls were noted using more expressions than boys to convey their feelings and emotional state. For example, during one session in the House Center two girls talking to two boys used the phrases “I like…” and “I feel…” nearly twice as often as the boys (18 versus 10). Another example of the girls’ use of emotional expressions was overheard from two girls while playing with dishes and cups in the House center:

First girl: “I was sad yesterday ‘cause my daddy left for a trip.”
Second girl: (touches the first girl) “Are you still sad?”
First girl: “I was this morning, but I started feeling better when I saw his picture and I knew he would be back tonight ‘cause he said we could go get a movie! I laugh when we go there ‘cause he’s funny!”
Second girl: “I like my Daddy’s laughing with me. It’s funny, and he makes me laugh when I cry.”

Younger boys were more likely to participate with the girls in their imaginative family role play. When older boys were asked to be the “daddy,” more often they would decline to participate, stating that they “don’t want to play house!” During the six sessions in the House Center older boys were observed participating in “family” play two times. In the other four sessions the boys’ play in the House Center was oriented around “super-hero” play. The boys used the
dress-up clothes as costumes for their comic book/cartoon alter egos. These incidents were consistent to what Doescher and Sugarwara found in their 1990 Study.

Young girls often play in cooperative groups in which each member has a role...boys often center their play around tangible goals, for example running faster than peers or building a block tower higher than before. (p.147)

The House Center provided an environment in which the girls' play was domestic and imaginative, while the boys used the center to exhibit fantasy play. Each managed to share the space, and the two distinct types of play did not affect the other.

**Results for Table Toy Center**

The children's original scores regarding behavior in the Table Toy Center measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results indicated a significant difference (U=16.5, p<.0), with the sum of ranks equal to 215 for the girls and 62 for the boys. The total number of prosocial acts observed by the boys was 995 with a mean of 111 acts per child. The girls were observed with 1,997 acts and a mean of 143 per child. Thus, the hypothesis is accepted for the Table Toy Center.

Variations of the children resolving conflicts were observed in this center. As noted earlier, prosocial behavior often entails a sacrifice by the helper that may range from minor inconveniences to significant social, economic, and physical costs. An example of this sacrifice was observed as two boys tugged on a car because they each wanted to play with it. Another boy looked at the two
struggling and offered the car he was playing with and said, “Greg can have mine ‘cause I want those blocks now.”

There was an incident in the Table Toy Center in which a child demonstrated concern for another’s well being. Tempers flared between two younger boys as they struggled over some cars. One swung a backhand at the other and sent the child to the floor off his chair. As he hit the floor and cried, an older girl sitting across from the boys called for a teacher’s help. The girl told the boy who hit the other “You’re not supposed to hit your friends!” She then moved to the crying child and said, “Don’t cry, Jimmy. You’re ok aren’t you?” The teacher sat down next to the trio and attended to the boy and complimented the girl on her quick actions. This incident of physical aggression contrasted with the girls’ conflict resolutions. No girls were observed hitting or fighting. Instead, the girls argued, yelled, and screamed at the oppressor. This alternative to fighting is consistent with Roberts and Stayer’s (1996) and other researchers’ findings on emotional expressiveness and emotional insight, which describes girls’ “preferential use of words over force.”

Results for Art Center

The children’s original scores regarding behavior in the Art Center measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results indicated a significant difference (U=20, p,.05), with the sum of ranks equal to 211 for the girls and 65 for the boys. The total number of prosocial acts observed for the boys was 1,295 with a mean of 144 per child. The girls were observed
with 2,379 acts and a mean of 170 per child. The hypothesis is, therefore, accepted for this center.

From the interviews with the teachers the researcher recorded all the teachers predicting that the girls would perform more prosocial acts than the boys. Rachael, an afternoon teacher, said she thought

The Art Center would prove to be a battleground for supplies. The boys will take glue and paint without asking if somebody is using them. I see the girls asking to share and using a lot more “thank you’s” than the boys.

Shelly supported the consensus by stating:
To me the boys are just not as concerned with other kids’ feelings as much. They [boys] help each other out but don’t use a whole lotta good expressions. I mean they say things and it sounds rough, but they mean well. I think they just don’t have as much patience when they have to wait for paint or things like that.

The researcher’s field notes also provided examples of how the girls in the Art Center demonstrated a better command of etiquette and sharing than the boys. One example occurred as three boys at the Art Center joined four girls. All seven squeezed around the table to draw with crayons and markers. The girls were observed sharing their markers with the boys after just one request. The boys held on to the markers and allowed the girls to ask more than one time. The limited supply of markers provided several occasions in which someone asked to borrow a marker. Girls were observed asking, for example, “Can I use that blue marker?” Boys were generally less cordial as they asked, “Will somebody give me a green marker? I need it.
The girls’ descriptions of their drawings and paintings were full of detail. They provided elaborate narratives for their artwork. During one session two girls sat and listened to another girl describe all the colors she used in her painting. This episode contrasted with the way in which the boys would discuss their artwork. The boys’ narratives for their artwork on one occasion became a game of each trying to outdo the previous speaker. The competition began with the first boy telling a story about his painting:

First boy: “This is a horse (pointing to the picture), and he’s running real fast!”
Second boy: “Yea, this is my cat, and she can climb trees really, really high and never, never get stuck!”
Third boy: “I paint a big, big rainbow that goes all across the sky.
Fourth boy: “That’s my dog, Snoopy, and that’s my other dog, Freego. They jump on you and will knock you down.”

Results for Computer Center

The children’s original scores regarding behavior in the Computer Center measured in acts were rank ordered, and a Mann-Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results indicate a significant difference (U=26, p<.05), with the sum of ranks equal to 205 for the girls and 71 for the boys. The total number of prosocial acts observed by the boys was 1,082 with a mean of 120 per child. The girls were observed with 1,996 acts and a mean of 143 per child. The hypothesis is accepted for this center.

In the Computer Center girls and boys each demonstrated patience by sitting quietly at the computer table and not disturbing the child at the computer. As each child had to wait for a turn, no observable difference was seen between
the genders. Each child would sign in and wait for a turn. The egg timer on top of the desk assured each of equal time. Neither girls nor boys were observed arguing when their time was over. However, on three separate occasions three boys were heard saying "Hold on!, "Wait a minute!". "Let me finish this first." The three boys’ attempts to delay the transitions were tolerated by the other children, but each boy was reminded that his turn was over.

These observations supported what the teachers had expected among the children. Carol had said:

> In the Computer Center all the children are really good. We spent a lot of time explaining the rules of the Center and they are the strictest of the learning centers. The kids know if there are fights or horseplay at the computer, they have to leave. There are no second chances. We tell them the computer is too expensive to replace. The girls and boys pretty much leave each other alone while working [on the computer]. The kids are able to save their progress and continually advance their computer skills.

Rachael added:

> The kids don’t really play at the computer like in other centers. They work. Sometimes I hear the kids talk about how much they use the computer at home. Some of these kids already understand more than me (laughs). The boys and the girls who use the computer a lot just play and play, and some would be happy if they were there all day.

More than any other child-chosen center, the Computer Center promoted cooperation, sharing, and patience among the children. The Computer Center also allowed the children to work alone or with a friend.
Results for Craft Activities

The children’s original scores regarding behavior within Craft activities, measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results indicated no significant difference (U=43.5), with the sum of ranks equal to 188 for the girls and 89 for the boys. The total number of prosocial acts observed by the boys was 491, with a mean of 54 per child. The girls were observed with 818 acts and a mean of 58 per child. Thus, the hypothesis is rejected for the Craft activities.

During the first Craft activity it was obvious that the children refrained from immediately painting on their papers. Instead they listened to the teacher’s instructions on how to use the sponges and bottles of paint. The teacher had a technique she wanted all the children to try. As they saw the results of the sponge painting, the children began to vocalize how they were going to use the sponges to paint their respective house, car, or animal creation. The boys jockeyed for position and the teacher’s attention. “Look at mine,” “See I used four pieces!” and “Does mine look right?” were some of the comments heard in the excitement of painting. The girls grouped together and methodically copied the technique they had witnessed earlier from the teacher. After the girls had finished their paintings each was seen showing her artwork to the teacher. Six of the nine boys kept the teacher occupied with conversation, while the rest of the children worked without supervision.
Results for Gross Motor Activities

The children's original scores regarding behavior within Gross Motor activities, measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for girls (N=14) versus the boys (N=9). The results indicated no significant difference (U=51), with the sum of ranks equal to 180 for the girls and 95 for the boys. The total number of prosocial acts observed by the boys was 668, with a mean of 74 per child. The girls were observed with 1,059 acts and a mean of 76 per child. Therefore, the hypothesis is rejected within this center.

The Gross Motor activity sessions required the highest levels of interaction and communication. The objectives for the sessions were to increase cooperative play, to increase expressive language, and to improve coordination as well as physical conditioning. The Gross Motor activities had the smallest variation of prosocial mean acts per child, and the sessions had the highest overall mean of observed acts (75) regardless of gender or learning center.

Results for Story Telling

The children's original scores regarding behavior within Story Telling sessions, measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the girls (N=14) versus the boys (N=9). The results indicated no significant difference (U=38), with the sum of ranks equal to 193 for the girls and 83 for the boys. The total number of prosocial acts observed by the boys was 336, with a mean of 37 per child. The girls were observed with 574 acts and a mean of 41 acts. This result indicates that the hypothesis is rejected.
Girls did not perform a significantly greater number of prosocial acts than did the boys. However, interaction was less frequent within the Story Telling sessions. The primary teaching objective was to improve listening and comprehension skills. This situation naturally reduced the amount of interaction and, consequently, the amount of prosocial behavior within these sessions. The Story Telling sessions were, however, a time for positive non-verbal communication. During the first story session, ten girls were observed sitting with their arms interlocked, and these same girls would also grab and hold onto each other during scary parts of the story.

Five boys during this “scary story” were observed popping up and down with screams and laughter. The boys also reached for their neighbors as the girls had done during the scary parts of the story. The teacher controlled the children’s outbursts by pausing from the reading until quiet was restored. When two children (a boy and a girl) noticed the teacher was waiting they started a continuous “SHHH!! Be quiet!” until order was returned.

The teacher-imposed activities incorporated the entire group into the sessions. This atmosphere created an environment in which both girls and boys were encouraged to participate and interact.

Table 1 provides a summary of the mean differences between genders within learning centers and activities. The Craft and Gross Motor Activities were the only centers not found to produce significant results. An asterisk denotes those results that were significant.
Table 1. Mann-Whitney U-Test of Means between Genders within Centers

<table>
<thead>
<tr>
<th></th>
<th>House</th>
<th>Table Toy</th>
<th>Art</th>
<th>Computer</th>
<th>Craft</th>
<th>Gross Motor</th>
<th>Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>141</td>
<td>143</td>
<td>170</td>
<td>143</td>
<td>58</td>
<td>76</td>
<td>41</td>
</tr>
<tr>
<td>Boys</td>
<td>102</td>
<td>111</td>
<td>144</td>
<td>120</td>
<td>54</td>
<td>74</td>
<td>37</td>
</tr>
<tr>
<td>Mann-Whitney-U</td>
<td>13.5*</td>
<td>16.5*</td>
<td>20.0*</td>
<td>26.0*</td>
<td>51.0</td>
<td>43.0</td>
<td>38.0</td>
</tr>
</tbody>
</table>

*significant p<.05

**Second Hypothesis**

The second hypothesis was that older children were expected to perform more prosocial behaviors than younger children. Results indicate this was accepted in all seven environments and significantly in four of seven.

**Results in the House Center**

The children's original scores regarding behavior in the House Center measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the older (N=13) children versus the younger (N=10) children. The results indicated a significant difference (U=23, p<.05), with the sum of ranks equal to 198 for older children and 78 for the younger children. The mean number of acts observed by older children in the House Center was 140 acts per child or a total of 1,824. The younger children had a mean of 107 acts per child and a total 1,075 prosocial acts. This result requires acceptance of the hypothesis for the house center.

The classroom teachers had predicted that older children would outperform the younger children. Shelly stated, "The younger children spend a lot of their time watching the older ones for direction." Tonya, echoed this sentiment:
Four-year-olds and older spend more time talking to each other and expressing their feelings. The three-year-olds are still learning about their own selves. They [younger children] watch the older kids for cues as to what to do...You'll see this a lot in the House and Table Toy Centers. The younger children let the older kids determine what games are played.

One instance, which demonstrated how older children help to define younger children's realities, occurred in the House Center. Four girls were playing with dolls and dress-up clothes. The girls each searched through the baby bed for their special doll. One girl, Sara, handed two dolls to a couple of younger girls and informed each "Here is your baby." The two girls accepted the dolls and immediately moved over to the play beds. Then the two laid the dolls down and covered them up with blankets. The two older girls put their dolls in small rocking chairs while they tried on a few dresses and modeled in front of a mirror. The younger girls sat down at a table and watched the older girls as they talked to each other.

Girl one: "I like these clothes,[spins around and smoothes her dress]. They are really pretty! Do you like This one?"

Girl two: "Yes, it’s blue and the flowers are small. I don’t have flowers on mine [looking down]. My dress has circles [looks over to the younger girls]. You two are too small to wear these clothes. You gotta be a big girl, and you are the little girls, ok?" [Smiles at the two sitting.]

The two younger girls looked at each other, smiled back at the older girls, and continued to sit and watch. The four girls continued to play their version of house. When the younger girls gave the older girls in the group an unacceptable
line, the older girls pointed out the slip-up with comments such as “No! Say that you are my sister, and you are here to help me.”

Another example of prosocial acts in the House Center was recognizing gestures designed to communicate to an individual secretly. One incident occurred between two girls, one older and one younger, who made eye contact across the House Center and worked together to surprise the other children playing in the Center. Brittney, the older girl, used her hands to direct Lauren, the younger girl, into position. Brittney guided Lauren one step at a time before they surprised the other children in the Center. This ability to interpret nonverbal communication demonstrated how each girl arrived at a shared meaning of what a “little step forward” meant when demonstrated by holding a thumb and index finger slightly apart and motioning the other to walk forward and giving a stop sign with the hand.

The older boys were also observed attempting to define how the younger boys should behave in the House Center. One occurrence involved two older boys, Tom and Eric and one younger, Greg, and some play cups and dishes. Greg had made his plan to play in the House Center. He was collecting all the toy dishes and setting them on the table according to color and size. Tom and Eric came up behind and watched him. Eric asked, pointing to the dishes, “What are you doing with those?” Greg said, “I’m getting ready for dinner.” Eric moved a little closer and said, “You’re not supposed to play with those girl things.” Greg sat down, looked at the table, and replied, “My Daddy puts plates on the table for dinner, and he lets me help him.” Tom asked, “Does your daddy cook?” Greg,
still sitting, answered, "Yea, 'cause I can't reach the stove, but he holds me up so I can see." Tom sat down and asked, "Why don't your Mama cook?" Before Greg could answer, Tom interrupted, "Girls cook." Greg looked up at Tom and defensively said, "There's no girls in my house. *Me and Daddy are boys.* He cooks, and I puts dishes on the table!" The two older boys looked at each other and walked over to the other side of the Center from Greg for the rest of the session. A girl to whom he served an imaginary meal soon joined Greg. The House Center was an environment in which older and younger children's play was amicable. The previous example was the only instance observed in which choice of play was criticized.

**Results for Table Toy Center**

The children's original scores, measured in acts, regarding behavior in the Table Toy Center were rank ordered, and a Mann-Whitney U-test was used to compare the ranks for the older (N=13) children versus the younger (N=10) children. The results indicated a significant difference (U=32.5, p<.05), with the sum of ranks equal to 189 for the older children and 88 for the younger children. The older children had a mean of 143 prosocial acts per child, and the younger children had a mean of 114 per child. The hypothesis that older children would outproduce younger children in this center is accepted.

The following scene was typical for boys within the Table Toy Center. One day four boys passed small plastic dinosaurs across a table. Two of the boys were older, and two were younger. They gave each figure a distinctive walk and growl. In between the character voices each boy shared in directing the
group’s performance. As they continued in their dialogue, the four exploring dino friends spent a lot of time trying out different growls and roars for their dinos. The importance each boy placed on perfecting the growl reduced the interaction among the boys. It was interesting that when two boys would accidentally bump into each other’s dino, the two would use nonverbal gestures such as waving hands at each other or shaking heads and their dinos’ growls to stake their claim. Eventually one would yield and retreat with a noticeable slump and lowered head. In all four of the dino confrontations it was the younger child who retreated. The older boys would continue to growl at the younger boys. Each growl was louder than the previous growl.

The older and younger girls in the Table Toy Center were not observed in confrontational play but rather worked together with puzzles or games. During one session two older girls and three younger children, two girls and one boy, sat together and played a card game called Memory.” The older girls explained the game to the others while they played. The first girl said, “See, you turn all the cards over like this,” (She spread out the cards face down). “Then whoever is first picks up two cards.” (She showed two fingers on her hand). ” You want ‘em to match. Oh, mine didn’t so it’s your turn.” (She pointed to the girl to her right) The second older girl then said, “I pick up my cards (she did), and they don’t match either.” The first girl then said, “Whoever has the most cards that match wins the game. Understand?” The younger children acknowledged by nodding their heads up and down and answering with a soft “Uh huh.” The group of children continued to play the game for the rest of the session. When the
younger children would get a match, the older girls would look at the pair and explain what the set was. For example, “Those are red squares, those are blue circles, or those are yellow triangles.” The younger children played with games, blocks and puzzles in the Table Toy Center. During these sessions, younger children were observed asking older children for help or assistance with an item twelve times. The older children provided guidance every time.

Results for Art Center

The children’s original scores, measured in acts, regarding behavior in the Art Center were rank ordered, and a Mann Whitney U-test was used to compare the ranks for the older children (N=13) versus the ranks for the younger children (N=10). The results indicated no significant difference (U=34.5), with the sum of ranks equal to 187 for the older children and 90 for the younger children. The older children had a mean of 166 acts per child compared to 151 acts per child by younger children. Younger children were observed performing more prosocial acts (1,514) in this center than in any other of the child-chosen centers. Thus, the hypothesis is rejected for the Art Center.

The statistical data produced unexpected results. The teachers were certain that older children would significantly outperform younger children in the Art Center. Some of the reasons they gave were:

The older children have a better tendency to share and work together more often. (Shelly, classroom teacher)

The younger children don’t seem to finish a lot of their pictures while they are in the Center. They do talk a lot. We always have to remind them to use inside voices. (Carol, lead teacher)
When a younger boy and an older girl sat together in the Art Center only to find out that there was not any more blue paper, the girl asked, “What about green?” The boy reached for the green paper and sparked back, “Yea! That’ll be cool!” The pair moved on to cutting out some shapes for a collage without missing a beat.

Another example of prosocial acts in the Art Center developed as three younger children, two boys and a girl, sat at the art table to draw. They each collected their materials and sat on the same side of the table with the girl in the middle. As she left the materials table, the girl sat down in the middle chair and pushed out the other two chairs for the boys. The trio began cutting paper and yarn into varying shapes and lengths. Their conversation was busy with talk of what they wanted to do with the glue rather than emphasis on the cutting of specific shapes. The trio was very attentive to each other when they spoke. The smiles and laughter they shared demonstrated the amount of attention they gave to the other’s facial gestures. “That’s funny when you look up that way!” said one of the boys. The other boy answered, “It’s my crazy eyeball like Pikachoo! (a cartoon character from the television show *Poke’mon*)!” The girl, eyes wide, waved her hands at the two boys and said, “Hey! Hey! I saw that eyeball and it was funny!”

The Art Center had the highest mean for child-chosen centers. The collaborative projects allowed the children to socialize with each other and still work alone when they wanted to. The Art Center also encouraged the older children to help younger children with certain fine-motor-skill tasks such as
cutting with scissors and coloring with markers and crayons. The cooperation of the children helped to maintain this learning center’s high occurrence of prosocial acts.

**Results for Computer Center**

The children’s original scores regarding behavior in the Computer Center, measured in acts, were rank ordered and a Mann-Whitney U-test was used to compare the ranks for the older (N=13) children versus the younger (N=10) children. The results indicated a significant difference (U=28, p<.05), with the sum of ranks equal to 193 for the older children and 83 for the younger children. The older children in the Computer Center outperformed the younger children, 1,862 vs. 1,216 total number of acts. The mean difference was 143 acts for older and 122 acts for younger children. The hypothesis is accepted for this Center as the older children did perform significantly more prosocial acts than younger children.

The classroom teachers had predicted that the older children would be more prosocial in the Computer Center. The reasons they gave focused on the older children’s better understanding of the computer games. Shelly said, “The older kids have been using the computer more, and they know the rules. They even help the younger ones with things like opening programs and using Windows.” Tonya expressed her position about younger children and the Computer Center this way: “I would think the younger children would have more arguments at the computer simply ‘cause they don’t understand a lot of the words and expressions.” Tonya also stated that the interactions among the
children at the Computer Center would be “few and far between” due to the nature of working on a computer. Carol disagreed with Tonya’s statement and explained her stance.

I’ve seen many of the children at the computer helping each other with finding the letters on the keyboard, using the mouse, putting paper in the printer, things like that. The children work together at the computer. They don’t talk a lot to each other, but I’d be surprised if they didn’t work together.

The observations by the researcher found both teachers’ comments to be valid. The older children did assist younger children at the computer with tasks such as starting programs and adding paper. However, the interactions between older and younger did become less frequent within the Computer Center as each child spent the majority of his or her time using the computer’s applications and not talking with each other.

Teacher-imposed Activities

The children’s original scores regarding behavior within the Craft activities, measured in acts, were rank ordered, and a Mann-Whitney U-test was used to compare the ranks for the older (N=13) versus the younger (N=10). The Mann-Whitney U-test results indicated no significant difference (U=35.5), between older and younger children. Therefore, the hypothesis is rejected. The older children had a mean of 59 acts per child and the younger children had a mean of 54 acts per child within the Craft activities. The results of the Mann-Whitney U-test for Gross Motor activities also indicated no significant difference between older and younger children. Both younger and older children had a mean of 75 prosocial acts during the Gross Motor activities. Again, the hypothesis is rejected. The
story-telling session's results indicated a significant difference (U=28, p<.05), with the sum of ranks equal to 193 for the older children and 83 for the younger children. The older children had a mean of 43 prosocial acts per child compared to 36 acts per child by the younger children during the two teacher-imposed, story-telling sessions. The hypothesis for this center is accepted.

During the sessions of Story-telling the children's behavior was without disruption. The children were heard giving their approval when a teacher said “Circle up for story time!” As the children worked their way into one large circle, seventeen of the children grabbed the wrist of friends to sit next to. Once they had settled, the group became focused on the story, and they talked to each other with comments about the story. Older children were observed using nonverbal communication while sitting in the circle nearly twice as often (70 vs. 38 acts recorded on behavior checklist). During the stories, the younger children watched the teacher and their older peers. A group of older girls were observed after every story applauding first. After the stories were told, the younger children, especially the boys, waited for cues to clap their hands. The data in Table 2 show the observed mean number of prosocial acts between older and younger children within child-chosen and teacher-imposed activities.

Table 2. Mann-Whitney U-Test of Means between Older and Younger Children within Centers and Activities

<table>
<thead>
<tr>
<th>Center</th>
<th>Older</th>
<th>Younger</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td></td>
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</tr>
<tr>
<td>Art</td>
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</tr>
<tr>
<td>Story</td>
<td>43</td>
<td>36</td>
<td>28*</td>
</tr>
</tbody>
</table>

*significant p<.05
Third Hypothesis

The third hypothesis for the study was that child-chosen activities would produce more prosocial behaviors than activities that were teacher-imposed. Each child was observed in twenty-four child-chosen activities and six teacher-imposed activities. The mean number of acts from all child-chosen and teacher-imposed activities were rank ordered by the magnitude of the change in the level of prosocial acts, and a Wilcoxon Signed Ranks test was used to evaluate the data. The results show a significant increase of prosocial acts for older children within teacher-imposed activities over the child-chosen sessions (T=.001, p<.05), with the ranks for increases totaling 91 and the ranks for decreases totaling 0. The results also showed a significant increase in prosocial acts within teacher-imposed activities over child-chosen sessions for younger children, (T=.005, p<.05), with the ranks for increases totaling 55 and the ranks for decreases totaling 0.

The Wilcoxon Signed Ranks test was also used in determining whether a significant difference in acts existed between the genders in child-chosen and teacher-imposed activities. The results indicated a significant increase in prosocial acts for teacher-imposed activities over child-chosen activities for girls (T=.001, p<.05), with the ranks for increases totaling 105 and the ranks for decreases totaling 0. The results further revealed a significant increase in prosocial acts from teacher-imposed sessions over child-chosen sessions for the boys, (T=.008, p<.05), with the ranks for increases totaling 45 and the ranks for
decreases totaling 0. The results indicated that the hypothesis should be rejected.

The classroom teachers had agreed that child-chosen activities would produce more prosocial acts than the teacher-imposed activities. Shelly, who said it best, explained the reason they felt this way.

When the teachers are leading large group, I feel like I'm always trying to get all the children on the same page. The kids seem to get along better in small groups. They are good friends. They don't leave anyone out. In large group there is always a fight for elbows (making triangles on each side and turning side to side). When the kids start twisting and laughing, it spreads and soon they're all tired of sitting and want to jump around.

Rachael suggested that

When the kids play where they want to play, they're doing what they want. They're no different than adults then. I think everybody is a better person when they get to do what they want and not what they're told.

The researcher’s observations provided a perspective different from the teachers’. The field notes had more prosocial acts recorded during large group-imposed activities. Some of the excerpts had summarized the children’s behavior as being compliant and receptive to the teachers’ requests during the large-group activities. The Gross Motor activities, as discussed earlier, had higher rates of interaction and provided a very excitable time for the children. The two activities allowed the children to jump and move around in ways that they normally were not allowed to do. For instance, one session had the children climbing, rolling, jumping, and crawling through an indoor obstacle course. The rainy day had kept the class inside, and the physical play gave the children the energy release they
needed. Rather than have the children competing against each other on teams, each child was timed individually. This technique had the classmates rooting for each other and praising each child one at a time as they finished.

During Craft activities the children asked several questions. For instance, two boys sat next to the teacher at the table and each took turns in repeatedly asking “Do you like my picture?” “Will you please help me paint like you?” “Can I help pass out some paint?” Every child at least once at the beginning of the Craft activity asked the last question. The importance associated with being the “helper” for the children was great. The children would all eagerly volunteer to assist. The teachers were seen creating tasks for some children to do, just so each had a job. For example, in one session Carol had selected a child to pass out brushes, one to pass out paper, one to pass out smocks, one to pass out paper towels, and on to pass out cups for mixing paint. Three were still asking to help so Carol had them collect previous paintings and return them to the children. This Craft session took ten minutes to begin because every child was trying to complete his or her own assignment. The children all smiled and laughed as they walked around the table placing their material down in front of an empty seat.

For twelve of the children the Craft projects were able to hold attention for the entire 45-minute session. As some children would finish the project and move to another center, these twelve continued to paint. While they painted, each child was observed looking at each other child’s face when speaking to them. The twelve preschoolers continued painting and talking until the teacher
asked them to clean up so they could clear the table for lunch. Each project
provided ample opportunity to discuss other children’s choices of material and
design. These exchanges were all positive, and every child was heard
complimenting at least one other child’s work. For example, a group of boys were
heard praising a girl’s painting.

First boy: “I like those colors. What did you mix?”
Second boy: “Can I use the sponge you had? I like
that shape.”
Third boy: “Do my picture like yours. I want a good
one for my mommy.”

The girls complimented each other in similar ways. One exchange took
place between Zoe and Denise, two older girls.
Zoe: “That's a nice picture, Denise!”
Denise: “I made it for my Mother.”
Zoe: “She will say it's pretty and put it on the ‘fridgerator,
Right?”
Denise: “Yes, she likes my pictures. That’s why I make
‘em for her.”
Zoe: “She gonna be proud of You!”

The conversations during teacher-imposed activities were noted as being
about general interest question and answers. Unlike in fantasy or role play, the
interactions are based on experiences real to the child, and they present them in
a matter-of-fact nonchalance. These types of conversations were seen
consistently only during teacher-imposed sessions.

Table 3 provides a comparison between gender groups and age groups
within child-chosen and teacher-imposed activities. The Wilcoxon Signed Ranks
test is used to determine significant differences between the groups.
Table 3. Wilcoxon Signed Ranks of Prosocial Acts within Child-chosen and Teacher-imposed Activities

<table>
<thead>
<tr>
<th></th>
<th>Child-chosen</th>
<th>Teacher-imposed</th>
<th>Wilcoxon T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>149</td>
<td>175</td>
<td>.001*</td>
</tr>
<tr>
<td>Boys</td>
<td>119</td>
<td>166</td>
<td>.008*</td>
</tr>
<tr>
<td>Older</td>
<td>148</td>
<td>177</td>
<td>.001*</td>
</tr>
<tr>
<td>Younger</td>
<td>124</td>
<td>165</td>
<td>.005*</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>172</td>
<td>.000*</td>
</tr>
</tbody>
</table>

*significant p<.05

Fourth Hypothesis

The fourth hypothesis was that prosocial acts would increase in frequency over time. In order to explore this question, the mean number of prosocial acts from the first three sessions (time 1) and the last three sessions (time 2) were rank ordered by the magnitude of the change in the level of prosocial acts. The Wilcoxon Signed Ranks test was then used to evaluate the data. The results show significant increases in prosocial acts from time 1 to time 2 across all learning centers for all children only within the Table Toy and Art Centers.

Prior to the observations the teachers had stated there would be an increase in prosocial acts over time. Shelly explained the consensus as a matter of "understanding their friends." She continued by saying,

Most of these kids were friends as babies so they know each other before they get to our room. The kids who start here later take about a month to really fit in, I think.

Tonya added,

Some of my class are pretty routine with their playmates. You can look around the room and see who’s with who and tell which kids have been friends longer. Over time they really begin to stick up and to look out for each
other. I know that since the kids have gotten to know each other better they get along better. I write a lot more notes on good things that happen now than earlier.

Results for the House Center

Within the House Center a high level of prosocial interaction occurred throughout the observation period, but no significant increase was observed. The first three sessions and the second three sessions in the House Center did show an increase in the mean number of prosocial acts observed. However, the House Center had a Wilcoxon T score of .082 and was found not to be significant. Thus, the hypothesis is rejected for the House Center.

Results for the Table Toy Center

From the first three sessions to the last three sessions, prosocial acts for all children significantly increased within this center (T=.013, p<.05), with the ranks for increases totaling 220 and the rank for decreases totaling 56. Among the girls the increase was from a mean of 68 acts to 74 acts during the final three sessions. However, this number was found not to be significant. The boys’ mean acts did significantly increase from 50 to 60 (.038, p<.05), as did older children’s (66 acts to 77 acts). The younger children did not show significant differences between time 1 and time 2.

Results for Art Center

Older and younger children did not show significant increases over time in the Art Center (Wilcoxon T=.009). The ranks for increases totaled 224, and the ranks for decreases totaled 53. Girls’ mean acts increased from 81 to 88 and boys’ mean acts increased from 64 to 72 during the last three sessions.
During the last three sessions of child-chosen, Art-center activities, the projects emphasized sharing between the children. The teachers had provided one set of paints per group of children. The four smaller groups were then instructed to work together, and each child had a specific part of a mural to paint. The children commented on each other group’s painting. Two older girls were overheard instructing three younger children on how to mix the paint. The older girls came in between the trio and first demonstrated how to pour the paint into a smaller container and then encouraged the younger children to mix some orange paint. As the first younger girl began to pour the red into the yellow, the second older girl took the girl’s hand and helped her place the container onto the table so it would not spill. As the task was completed, the older girl said, “You’re doing good, Vickie! You don’t need any more help from me. You’re not a little girl anymore!”

It should be noted that older girls were the only group that commented on the progress of another group. Imaginative role play was used during each episode of demonstrating respect for another’s choice of play. One example of showing respect was to take an interest in what another person was doing. An illustration of how this occurred was that some older children pretended to be adults and would give “advice” to the younger children. Older children expressed to the younger children six times, during the last child-chosen play session that the younger could do more things now because “Now you are older,” as stated by five-year-old Jackie, to Sara and Sean each 45 months old. Jackie continued,
"When you get older, you do more work and you gotta be nice to people, 'cause that's what Miss Carol said and Mama said. That's right!"

Results for Computer Center

There were not significant increases in prosocial acts in the Computer Center. The number of observed acts decreased during the last three sessions for all girls, older, and younger children. Wilcoxon Signed Ranks for the Computer Center showed no significant difference, (T=.260), with the ranks for increases totaling 101 and the ranks for decreases totaling 175. This result coincides with observational data, which supports a decrease in interaction at the Computer Center. The children are focused on playing the games. The mastery of computer skills is essential to solve the puzzles, and the children's attention is on the monitor instead of on the faces of their friends.

An example of the exchanges in the Computer Center, which demonstrated the cooperation of the children but also the decreased interaction, occurred between two girls, Kim and Tress, one day (46 and 61 months respectively). They walked to the Computer Center together. As Kim slipped into the chair at the desk just ahead of Tress, she said, over her shoulder, “You can still be next.” Tress crossed her arms, pouted, and said, “You better call me when you’re finished!” This exchange is an example of a prosocial episode, which was typical in its layering of several categories on the observation checklist. Avoiding conflict, engaging in cooperative play, and problem solving were all demonstrated by the previous exchange. Children were observed at later dates setting an egg timer to a predetermined amount of time as selected by
the children. The cohesiveness appeared to be extremely high within the Computer Center. After the children made their plans, they seemed to determine whose turn was first without much debate. This ability may have been due to their understanding that the “timer is there to make sure everybody plays on the computer for the same amount of time.” The teachers made this statement as they explained it to the interns when they began working in the classroom.

**Teacher-imposed Sessions**

The observed Craft sessions were held the first and third week. The Story-telling sessions were during the second and fifth week of observation and the Gross Motor activities were witnessed during the third and sixth week of observation. The limited comparison (2 sessions versus 6 sessions) appears to have affected measurable results. The teacher-imposed activity results were: The Craft activities, $T=0.293$, with the ranks for increases totaling 173 and the ranks for decreases totaling 104; The Gross Motor activities, $T=0.098$, with the ranks for increases totaling 68 and the ranks for decreases totaling 163; and the Story Telling activities, $T=0.056$, with the ranks for increases totaling 171 and the ranks for decreases totaling 61.

Table 4. depicts the observed mean number of prosocial acts per center for genders and age groups. The Wilcoxon Signed Ranks test was used to determine significant differences among groups and between time periods.

**Age and Sex Interaction**

The researcher found it necessary to examine the variables age and sex for interaction effects in the data. It was discovered that age and gender interact
Table 4. Wilcoxon Signed Ranks of Observed Mean Prosocial Acts per First Three Sessions and Last Three Sessions

<table>
<thead>
<tr>
<th></th>
<th>Older</th>
<th>Younger</th>
<th>Girls</th>
<th>Boys</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>House 1</td>
<td>68</td>
<td>50</td>
<td>68</td>
<td>49</td>
<td>60</td>
</tr>
<tr>
<td>House 2</td>
<td>72</td>
<td>57</td>
<td>74</td>
<td>53</td>
<td>65</td>
</tr>
<tr>
<td>Table 1</td>
<td>66</td>
<td>56</td>
<td>68</td>
<td>51</td>
<td>62</td>
</tr>
<tr>
<td>Table 2</td>
<td>77*</td>
<td>58</td>
<td>47</td>
<td>60*</td>
<td>69*</td>
</tr>
<tr>
<td>Art 1</td>
<td>80</td>
<td>69</td>
<td>82</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>Art 2</td>
<td>86</td>
<td>82</td>
<td>88</td>
<td>79*</td>
<td>84*</td>
</tr>
<tr>
<td>Computer 1</td>
<td>73</td>
<td>62</td>
<td>74</td>
<td>59</td>
<td>68</td>
</tr>
<tr>
<td>Computer 2</td>
<td>70</td>
<td>60</td>
<td>68</td>
<td>61</td>
<td>65</td>
</tr>
<tr>
<td>Craft 1</td>
<td>58</td>
<td>50</td>
<td>59</td>
<td>51</td>
<td>55</td>
</tr>
<tr>
<td>Craft 2</td>
<td>60</td>
<td>57*</td>
<td>58</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>Gross Motor 1</td>
<td>74</td>
<td>73</td>
<td>75</td>
<td>73</td>
<td>74</td>
</tr>
<tr>
<td>Gross Motor 2</td>
<td>75</td>
<td>76</td>
<td>77</td>
<td>75</td>
<td>76</td>
</tr>
<tr>
<td>Story 1</td>
<td>40</td>
<td>35</td>
<td>39</td>
<td>37</td>
<td>38</td>
</tr>
<tr>
<td>Story 2</td>
<td>45</td>
<td>36</td>
<td>43</td>
<td>38</td>
<td>41</td>
</tr>
</tbody>
</table>

*significant p<.05

to affect the prosocial behaviors of preschool children within learning environments. Older girls ranked first for prosocial acts within six of the seven learning environments. Younger girls were ranked second in all four child-chosen centers and ranked first in the Gross Motor teacher-imposed activity. Older boys ranked above younger girls during the teacher-imposed Craft and Story sessions. Younger boys were ranked fourth within all seven learning environments. However, during the teacher-imposed sessions their mean number of prosocial acts was not significantly less than those of any other age/sex group.

As stated earlier, girls were found to have significantly higher means for prosocial behavior than boys within child-chosen centers. When age/sex groups were analyzed using the Wilcoxon test for signed ranks of paired samples, significant differences were found between older girls and older boys within the House and Computer Centers only. There were no significant differences
between older girls and older boys within any teacher-imposed activity. Older boys significantly outperformed younger boys within the House and Table Toy Centers and younger girls had a significantly higher mean of prosocial acts than did younger boys within the House Center. During the teacher-imposed activities the only significant difference among mean scores was between older girls and younger boys during the Story Telling sessions. The older girls had a mean of forty-four compared to thirty-four for the younger boys. The results of the age/sex groups' mean act per learning center with a cross comparison within child-chosen and teacher-imposed sessions can be seen in Tables 5, 6, and 7.

Table 5. Mean Prosocial Observed Acts per Learning Center or Activity

<table>
<thead>
<tr>
<th>Learning Center</th>
<th>Older Girls</th>
<th>Older Boys</th>
<th>Younger Girls</th>
<th>Younger Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>House</td>
<td>150</td>
<td>118</td>
<td>125</td>
<td>90</td>
</tr>
<tr>
<td>Table Toy</td>
<td>147</td>
<td>133</td>
<td>135</td>
<td>92</td>
</tr>
<tr>
<td>Art</td>
<td>174</td>
<td>149</td>
<td>163</td>
<td>140</td>
</tr>
<tr>
<td>Computer</td>
<td>151</td>
<td>125</td>
<td>127</td>
<td>117</td>
</tr>
<tr>
<td>Craft</td>
<td>60</td>
<td>57</td>
<td>56</td>
<td>53</td>
</tr>
<tr>
<td>Gross Motor</td>
<td>75</td>
<td>75</td>
<td>77</td>
<td>73</td>
</tr>
<tr>
<td>Story</td>
<td>43</td>
<td>42</td>
<td>38</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 6. Wilcoxon Signed Ranks Test for Paired Sample Differences between Age/Sex Groups within Teacher-imposed Activities

<table>
<thead>
<tr>
<th></th>
<th>Older Girls</th>
<th>Older Boys</th>
<th>Younger Girls</th>
<th>Younger Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Girls</td>
<td>X</td>
<td>No</td>
<td>No</td>
<td>Only in story*</td>
</tr>
<tr>
<td>Older Boys</td>
<td>No</td>
<td>X</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Younger Girls</td>
<td>No</td>
<td>No</td>
<td>X</td>
<td>No difference</td>
</tr>
<tr>
<td>Younger Boys</td>
<td>&lt;in story</td>
<td>No</td>
<td>No</td>
<td>X</td>
</tr>
</tbody>
</table>

p< .05
Table 7. Wilcoxon Signed Ranks Test for Differences between Age/Sex Groups within the Child-chosen Centers

<table>
<thead>
<tr>
<th></th>
<th>Older Girls</th>
<th>Older Boys</th>
<th>Younger Girls</th>
<th>Younger Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Girls</td>
<td>X</td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Older Boys</td>
<td>X</td>
<td></td>
<td>No</td>
<td>Older boys &gt; younger boys</td>
</tr>
<tr>
<td>Younger Girls</td>
<td>X</td>
<td></td>
<td>Younger girls &gt; younger boys</td>
<td>all centers</td>
</tr>
<tr>
<td>Younger Boys</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

p< .05

The third question of the study asked how did the passage of time affected prosocial behavior. Younger boys in the Art and Craft Centers were shown to have significant increases in prosocial behaviors. During the first three sessions of child-chosen Art activities, the younger boys had a mean prosocial act score of 58 per child. This mean increased to 82 acts per child during the last three sessions. Younger boys within the teacher-imposed Craft sessions also showed a significant increase in mean acts observed, from 47 per child for the first three sessions to 58 acts per child for the last three sessions. Younger girls showed significant increases in prosocial acts during the teacher-imposed Gross Motor sessions (72 to 80). All age/sex groups had increases in observed behavior within the House, Table Toy and Art Center. In Table 8 all age/sex groups are shown with time 1 and time 2 mean act scores for all seven activity sessions.
Table 8. Mann-Whitney U-Test of Difference per First Three Sessions and Last Three Sessions by Age/Sex Groups

<table>
<thead>
<tr>
<th></th>
<th>Older Girls</th>
<th>Older Boys</th>
<th>Younger Boys</th>
<th>Younger Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>House 1</td>
<td>73</td>
<td>58</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>House 2</td>
<td>77</td>
<td>60</td>
<td>67</td>
<td>48</td>
</tr>
<tr>
<td>Table Toy 1</td>
<td>69</td>
<td>60</td>
<td>68</td>
<td>44</td>
</tr>
<tr>
<td>Table Toy 2</td>
<td>78</td>
<td>74</td>
<td>67</td>
<td>49</td>
</tr>
<tr>
<td>Art 1</td>
<td>83</td>
<td>73</td>
<td>80</td>
<td>58</td>
</tr>
<tr>
<td>Art 2</td>
<td>91</td>
<td>76</td>
<td>83</td>
<td>82*</td>
</tr>
<tr>
<td>Computer 1</td>
<td>79</td>
<td>60</td>
<td>66</td>
<td>58</td>
</tr>
<tr>
<td>Computer 2</td>
<td>72</td>
<td>64</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>Craft 1</td>
<td>58</td>
<td>57</td>
<td>54</td>
<td>47</td>
</tr>
<tr>
<td>Craft 2</td>
<td>62</td>
<td>57</td>
<td>57</td>
<td>58*</td>
</tr>
<tr>
<td>Gross Motor 1</td>
<td>74</td>
<td>72</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>Gross Motor 2</td>
<td>75</td>
<td>78</td>
<td>80*</td>
<td>74</td>
</tr>
<tr>
<td>Story 1</td>
<td>41</td>
<td>40</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>Story 2</td>
<td>45</td>
<td>44</td>
<td>39</td>
<td>34</td>
</tr>
</tbody>
</table>

*significant p< .05

The last Mann-Whitney U-test was calculated to determine whether differences occurred between child-chosen sessions and teacher-imposed sessions. The results indicated that older boys had a significantly higher mean for prosocial acts within teacher-imposed sessions, as opposed to child-chosen sessions (174 versus 131, U= .068, p< .10). All other ages/sex groups also had significantly higher means for prosocial acts (p< .05) during the teacher-imposed sessions over child-chosen sessions. These results are presented in Table. 9.
Table 9. Mann-Whitney U-Test for Significant Differences between Child-chosen and Teacher-imposed Activities among Age/Sex Groups

<table>
<thead>
<tr>
<th>Age/Sex Group</th>
<th>Child-chosen</th>
<th>Teacher-imposed</th>
<th>Wilcoxon T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Girls</td>
<td>156</td>
<td>178*</td>
<td>.008*</td>
</tr>
<tr>
<td>Older Boys</td>
<td>131</td>
<td>174**</td>
<td>.068**</td>
</tr>
<tr>
<td>Younger Girls</td>
<td>138</td>
<td>170*</td>
<td>.043*</td>
</tr>
<tr>
<td>Younger Boys</td>
<td>110</td>
<td>160*</td>
<td>.043*</td>
</tr>
</tbody>
</table>

*p< .05, **p< .10

Summary

To summarize, the first hypothesis of the study stated that girls would be observed performing more prosocial acts than would boys within all learning centers. The girls did outperform the boys prosocially within all four child-chosen centers but no difference was found during teacher-imposed sessions. The second question addressed older children’s prosocial performance versus younger children’s performance. The results showed older children having significantly higher means within the House, Table Toy, and Computer Centers and Story-telling sessions. However, the younger children were not outperformed within the Art Center, Gross Motor, or Craft sessions. The third hypothesis predicted that child-chosen sessions would produce more prosocial acts than would teacher-imposed sessions. However, the opposite was found to be true. Finally, the fourth hypothesis predicted that prosocial acts would increase over time. The results for the Table and Art Centers show there was a significant increase of prosocial acts observed between the first half of the observation period and the last half among all children. Younger children had a significant increase of prosocial acts within the Craft sessions, and boys had a
significant increase in observed prosocial acts within the Art and Table Toy Centers from time 1 to time 2. A discussion and implications of the study's results, suggestions for future research, and limitations of the present study will be outlined in the next chapter.
CHAPTER VI
DISCUSSION AND CONCLUSION

Children attending preschool need a physically and emotionally secure learning environment that supports their developing self-knowledge, self-control, and self-esteem, and at the same time encourages them to respect the feelings and rights of others (Hohmann and Weikart 1995, p. 15). According to the High Scope curriculum, knowing one’s self includes knowing about one’s body, feelings, and abilities. It also means identifying one’s self as a member of a family and larger cultural community. Accepting and taking pride in one’s self comes from experiencing success and being accepted by others as a unique individual. Self esteem develops as children master new abilities, experience success as well as failure, and realize their effectiveness in handling increasingly challenging demands in their own ways (Hohmann and Weikart 1995, p. 16).

The curriculum also allowed for children to develop social skills that helped them to work and to play cooperatively and productively with other children and adults. For this curriculum to be successful the teachers responded quickly and calmly to prevent children from hurting others, encouraged children to express their feelings and assert their rights in socially acceptable ways, encouraged cooperation rather than competition, and helped all the children to feel valued as members of the group.
The first hypothesis of the study was that girls would be observed performing more prosocial acts than would boys within all learning centers. The girls did significantly outperform the boys prosocially within all four child-chosen centers, but no difference was found during teacher-imposed sessions. This result indicates that the attending members within a setting were more influential to boys and specifically to younger boys. The girls in this study, when left to themselves, were simply more polite than the boys. When staff participated with the children in play and showed more interest and concern towards the children's play, the boys' behavior was more prosocial than when staff were absent from the group's playtime.

The second hypothesis was that older children were expected to perform more prosocial behaviors than younger children. The results showed older children had significantly higher means of prosocial acts within the House, Table Toy, and Computer Centers and Story Telling sessions. However, the younger children were not outperformed within the Art Center, Gross Motor, or Craft sessions. The findings relating to this hypothesis are interesting for a few reasons. One must accept that typical behaviors for the Art Center, Gross Motor, and Craft Sessions are generally more structured and have more clearly defined rules for participants (i.e., art and craft projects have sequential patterns, while House Center play and Table Toy play are more improvisational).

The third hypothesis predicted that child-chosen sessions would produce more prosocial acts than teacher-imposed sessions. However, the opposite was
found to be true. The influence of adults on children’s prosocial behaviors was seen in each learning center.

Finally, the fourth hypothesis predicted that prosocial acts would increase over time. The results for the Table and Art Centers show there was a significant increase of prosocial acts observed between the first half of the observation period and the last half among all children. Younger children had a significant increase of prosocial acts within the Craft sessions, and boys had a significant increase in observed prosocial acts within the Art and Table Toy Centers from time 1 to time 2.

**Practical Implications**

This study has found that the social self is interactional. Some prosocial behaviors exhibited by the KCDC preschoolers appear to be triggered by the learning environment itself. Some of these behaviors are the use of appropriate or expected language within centers and the sharing of materials. Children were observed focusing their fantasy play within the constructs of each learning center. A group of boys was observed one day quickly going into each of the learning centers in a pattern. The group circled the room counterclockwise, and upon entering the area of a new center the lead child would announce the learning center’s name, after which the group would all begin to play with the materials at hand. As the group entered the Book, Art, and Computer Centers, they moved more slowly, spoke more quietly, and acknowledged others in the centers. When the group entered into the House, Table Toy, and Gross Motor Centers, their excitability remained high. Their speech was quicker, and their
play was more competitive. These different patterns of children’s play indicate that preschool teachers have an effective method to encourage prosocial behaviors by creating consistent and developmentally appropriate learning environments. Moreover, by developing and implementing plans for cooperation, preschool children’s prosocial behaviors become more frequent as their preschool experiential time increases.

The consistency of the classroom’s enrollment and staffing must also be considered when expecting a more prosocial atmosphere. The emergence of a prosocial classroom is dependent upon the trust level within that room. Children appear to be no different from adults with regard to some characteristics of behavior. The extent to which a child is at ease within a group correlated with his or her attachment level. The stronger the attachment, the more likely it is that concern for others is exhibited. This strengthening of attachment to others comes from length of interactional exposure. The KCDC children greatly benefited from their high familiarity with each other as the number of excluded children during play sessions was zero. The present study indicates that childcare centers that base their curricula in active learning need to employ teaching methods that emphasize plans for cooperative lessons. It is also helpful to encourage continued enrollment whenever possible. The long-term attention to social development produces a high cohesiveness among playgroups and low incidence of antisocial behavior. Establishing warm, friendly, and comfortable environments allows children to explore their reality without fear or anxiety.
Social interaction may then occur with a more frequent display of prosocial behaviors.

The observations of the children at the Kidtown Child Development Center’s preschool classroom illustrated that the type of learning environment is related to the frequency of prosocial behaviors. For example, within the Art Center observed prosocial behavior was more frequent than within any other learning center. Some of the teachers’ learning objectives for this center were to improve sharing skills, encourage creativity, and promote communication skills. These objectives, in cooperation with the spatial arrangement of the center, provided an environment in which prosocial interaction were high. The Art Center’s design positioned children in close proximity and encouraged them to work together by sharing materials and communicating their ideas and wishes to each other. The Art Center was also the environment in which teacher-imposed activities had the highest observed prosocial mean scores. The author believes that this finding implies that young children have an understanding of social expectations based upon multiple cues within the environment. Young children use the combination of cues such as presence of peers, physical space, and past experience to form their image of their role within the group.

The children were also observed choosing homogeneous playgroups. For example, the children followed gender separation in their free playtime. Examples of the gender-based division of play were seen every day. As the girls imagined family role-play adventures in the House Center, the boys worked together in the Table Toy Center building towers, castles, and larger architectural
structures out of wooden and plastic blocks. The researcher observed that the child-chosen centers in which more coed participation occurred were the Computer and Art Centers. The findings in this study demonstrate that masculinity and femininity reflect norms and values that are internalized by children through direct cultural transmission. The teacher’s reminders of how some behaviors were not appropriate in the classroom demonstrated this transmission of norms.

**Theoretical Implications**

This research has indicated that preschool children’s classroom learning environments affect their interaction and consequential behavior. The function or purpose of a learning environment’s curriculum leads to the type of interaction it is to foster. The material specific to a learning center (e.g., paper, glue, crayons, and paint) supports the type of interaction (e.g., sharing, taking turns, and learning how to ask for objects). Within each situation, reality is constructed by the children’s collective definition of the situation. Because of the teachers’ instructions about acceptable behavior and the teachers’ modeling of these behaviors, the children were observed to interact according to the rules established for the classroom. The intensity of the environmental influence on prosocial behavior was apparent by the changes and differences among the children’s age/sex groups. The setting of interaction and attending members was of more importance to boys and specifically to younger boys. In addition, competitiveness for attention was apparent by the boys’ actions during teacher-led activities. These observations would suggest that boys behave more
appropriately within teacher-initiated learning sessions than within child-initiated learning sessions. The data further indicate that boys are more likely to display prosocial behaviors in large (more than 5 children) and small (less than 5 children) teacher-led groups. This result would suggest that boys prosocial behavior is influenced by the presence of adults more than girls.

It is interesting that younger children had 114 prosocial acts and older children had a significantly different 143 prosocial acts at the Table Toy Center. Of the 114 acts 43 were incidents where the younger child was observed avoiding confrontations, using nonverbal language, and finds alternatives to conflict. Further analysis of the data revealed that imaginary role-play is correlated with

The girls’ prosocial behavior within learning environments was not significantly affected by the function of the learning environment. The girls’ average number of prosocial acts was higher than the boys’ number of prosocial acts in all activity sessions. The frequency range for prosocial acts within learning centers was smaller among girls. Boys’ would seem to benefit more from structured activities than from those activities without direct adult involvement.

Statistical results revealed that within child-chosen activities, girls significantly outperformed boys in all four centers. Not only were the girls’ frequencies of prosocial acts higher than the boys’, but it was also observed that the girls often coached other children on how to behave in play situations. As mentioned, previous literature has stated that girls pay more attention to the
“character” of their playmates. On these occasions girls were observed providing instruction on appropriate behavior to other children. These instructional episodes were equally divided among girls and boys. Boys were observed instructing others on ten occasions. It is interesting to note that eight of the ten episodes were boy to boy as boys were more likely to be seen playing in same-sex groups. It was more likely that one would see girls breaking into a group of boys to play rather than boys asking to play with girls. However, when boys did ask to play with girls, other boys did not ridicule the boys for playing with girls. The girls seemed to take the initiative more quickly to cross gender lines than did boys.

Social learning theorists Alfred Bandura and Julian Rotter have maintained that most social learning in early childhood is the result of vicarious, rather than direct, reinforcement. (Bandura and Walters 1959; Rotter 1954) That is, children learn as a result of observing the consequences of a model's behavior rather than direct reinforcement of their own behavior. When they found themselves in a new setting or situation, the KCDC children often would imitate the behaviors of others. This imitation was as simple as mimicking body language or as complex as copying the walk and talk of another. This result demonstrates how exposure to modeled behavior can greatly affect social behavior. Relating to the subject of violence among young children, these data show again the strong link between moral development and positive experience. If children understand that prosocial actions and behavior are social norms then those actions and behaviors will be observed in their play. If children can
internalize the fact that antisocial behaviors are not acceptable social norms, their frequency of occurrence should be minimal. The low occurrence of antisocial behavior must be attributed to two factors of influence. These include peers and environment. The peer group transmits the class’ rules and norms and the environment has specific expected behavior established by the teachers.

**Methodological Implications**

The present study incorporated multiple research methods. The use of multiple research methods provided this research with a far richer source of data than would have been collected if a single method had been employed. Each of the individual methods of research provided the study with specific data. For example, the statistical data provided evidence that the girls were more prosocial within learning centers. However, if this method had been the only one used in the study, it would exclude the context of the observed behaviors. The observations and the interviews provided the active part of this study’s data. The field notes give reasons to explain why events happened the way they did. The statistical evidence for this study was the framework. The closer examination of the data occurred only after the acts were counted. The quantitative method provided the “what” of the study and the qualitative methods provided the “how,” the “where,” and the “when.”

Multiple research methods allow a triangulation of data. This combination of data served to reinforce the findings. Interviews with the classroom teachers provided background information, which helped to clarify the learning centers’ objectives. The teachers provided facts about the class’ routines and schedules,
which were later observed by the researcher. Limiting the research to only observation would have eliminated this insight into the KCDC classroom.

It must be recognized that this study was limited by the use of only one child-care facility. Having a second classroom to observe within a facility could further determine the influence of specific curriculum and teaching method as well as adding to the overall sample.

Play Centers and Learning

Engaging in play as a child is a way to explore the potential within. The transmission, exchange, and influence of the social group encourage children's learning. Children use play as their most effective method of learning. Imaginative play that occurs without incident is in itself a prosocial gesture by the participants. Cooperative play works to produce equally beneficial play. All children are given opportunity and encouragement in their play. The effects of consistent social and emotional nurturing can be seen, for example, in their handling of frustration. When children become upset because others are not playing their way, sometimes a brief encounter with a teacher guides the children towards a happy resolution, and sometimes children may initiate attempts to resolve conflict on their own. This recognition of others as equals benefits the individual and the group.

As stated, the Art Center had a higher frequency of prosocial acts than any other center. Combining the child-chosen and teacher-imposed Art sessions, analysis revealed that all younger children had significant differences in prosocial acts between the Art Centers and any other centers. Older children,
however, did not demonstrate that same difference between the Art Center and other centers. This result suggests those children between 36 and 48 months are more likely to exhibit prosocial behaviors within goal-specific environments such as the Art Center rather than within less specific learning environments such as the Table Toy or House Center. This finding may be explained by older children’s ability to follow a sequential list of instructions during a teacher-led art project more easily than are younger children. The emphasis on imaginative play within the House and Table Toy Centers supports a cognitive-development approach to socialization. The younger children were observed to be as prosocial as older children within activities that did not rely heavily upon dialogue and improvisation. The familiarity found in cutting, gluing, and painting allowed the younger children to express themselves with confidence. The uncertainty of the House Center may have prevented the younger children from being as involved. This dependency upon familiarity in self-expression was a noteworthy finding.

This study proposes that socialization within a child-care center is a combination of peer and ecological influences. Gender differences are also seen in child’s play. Preschool boys’ play is more rambunctious and competitive than preschool girls’ play. Consequently, this condition does not facilitate a high occurrence of prosocial behavior among boys. Due to the self-serving objective of competition, demonstrating a concern for others’ well being is not a norm for competitive play. This behavior was seen in every center during child-chosen
activities. The boys’ observed number of prosocial actions was significantly less than was the girls’.

KCDC girls’ play is more collaborative and acquiescent. Preschool girls play in a collective group in which the goal is achieving a collective reward. Girls were more likely to be receptive to others’ suggestions. The overall play among girls was as a collective. The boys, on the other hand, formed smaller alliances (groups of three or four).

**Future Research**

The present observational study should be seen as laying the groundwork for more structured research projects. Many of the factors believed to be important influences on the behavior of preschool children could not be investigated by using some form of experimental manipulation and control. These real world reactions to environmental stimuli could only be seen in their natural state. Information from this study may be beneficial to parents, educators, and agencies dedicated to children and children’s rights. Tracking patterns, behavioral tendencies, and environmental influences of preschool group behavior can provide answers to questions such as “How do learning centers influence behavior?” and “When are children in a play group most likely to exhibit prosocial behavior consistently?”

Prosocial behaviors are just one type of behavior that could have been measured for the interactional effect of age, gender, and environment. Other studies could examine such aspects of socialization as: social perception, conformity, prejudice and discrimination. The learning center’s materials could
have been manipulated to determine the effect props have on prosocial behaviors within environments. The classroom curriculum could be compared to other curricula to see how learning philosophy affects frequency of prosocial acts. For example, the child-initiated High Scope differs greatly from the more structured teacher-directed Montessori school. Would High Scope students' frequency of prosocial acts diminish in a learning environment in which child choice is limited? Would Montessori preschool children's prosocial acts increase or decrease upon use of the High Scope theory?

The children at KCDC were the first group to be observed with this instrument, and remeasuring another group of children would increase the reliability of the study. The child's family type and other socioeconomic information as factors of analysis could have analyzed the data gathered in this study. Another suggestion for future research is that further analyses be done with single-parent families or one-child families as variables. Also, a larger sample would provide a higher confidence in the reliability of this research.

This researcher originally sought to videotape the session and use the tapes to record all acts rather than rely on only the acts observed. Still, the researcher feels that by adhering to a predetermined schedule of observation days with varying times, a representative sample of prosocial acts was obtained. If this study were to be duplicated, it would be beneficial to have a video journal or a team of researchers so future data may be more inclusive.

At the conclusion of this study, many questions remain unanswered. The possibility of future research on children attending child-care centers is plausible.
The information that is obtained sheds light on children's social worlds and how their environment influences their behavior. Knowing more about this relationship can only help to better educate both the children and the teachers. In the ever-quickening pace of society, children seem to grow up faster every generation. This acceleration has produced some horrific episodes of younger and younger children performing violent acts out of anger. It is here that the need for prosocial education is most apparent.

This study has attempted to answer questions about prosocial behavior. In a world where children are becoming too often the initiators of violent anti-social behavior, this project focused on the positive behaviors that young children demonstrate. After so much time observing and teaching young children, interacting with adults is more often déjà vu. Children are all too often aware of their place in the world. The sentient child is quite common as indicated by fantasy-play dialogues overheard. Young children define and interact with and according to the environment. If a specific learning environment does contribute to higher frequency of prosocial behaviors, then child-care centers should emphasize this factor in their curricula.
APPENDIX A

Prosocial Behavior Checklist
M F Age(# of months) ____

Date:________ Location:________________________________________

Type of Interaction:____________________________________________

Self:

respects other children's choices of play
(provides positive comments about choices made by peers)

problem solving
(attempts to work out tasks independently)

talks with each child
(is sociable, not shy, generally speaks to several children)

makes eye contact when talking to another child

uses positive nonverbal messages with peers
(holding hands, hugging, smiling)

takes turn when talking with child
(does not interrupt, allows other to finish talking)

Language:

responds prosocially to verbal messages from other child verbally
(answers and/or acknowledges with appropriate response)

responds prosocially to verbal messages from other child nonverbally
(answers and/or acknowledges with appropriate response)

responds prosocially to nonverbal messages from other child verbally
(answers and/or acknowledges with appropriate response)

responds prosocially to nonverbal messages from other child nonverbally
(answers and/or acknowledges with appropriate response)
Interaction:

shows sensitivity to other’s feelings
(does not make fun of a peer crying, whining, or being sad)

respects “no” from peer, does not force peers to do something they do not want
to do (does not try to enforce against one’s will)

expresses feelings in words
(uses angry, mad, sad, happy to express own mental state)

finds alternative to conflict
(suggests compromise)

engages in cooperative play
(plays with others and invites others to join)

shares
(during episodes of shortages willingly gives to others)

Concern:

responds prosocially to cries/pleas of others
(vocal recognition of others in distress)

comforts other children after the fact
(verbal or physical reassurances with respect to emotional distress)

attends prosocially to cries/pleas of others
(physically addresses needs of others)

comments on behavior of others when potentially dangerous
(points out others that defy acceptable behavior)
APPENDIX B
Glossary

**Act**—an individual, specific behavior.

**Environment**— anything not included within the interaction of the components of a system. It may also be considered as anything that affects the system, but over which it has no control (Churchman 1968, p.50).

**Episode**— a series of acts or interaction within the same context.

**Ethology**— the study of animal behavior, especially of innate patterns.

**Territoriality**— the proclivity of organisms, including man, to seek, obtain, and defend an area of space or action. This serves to order and stabilize behavioral space.

**Preschoolers**— children ranging in age from 36-60 months.

**Preschool, child development center**— organized form of child-care.

**Older children**— children over 48 months.

**Younger children**— children between 36-48 months.
REFERENCES


