

A STUDY OF THE CONCEPT OF ALTRUISM AMONG
INSTITUTIONALLY MENTALLY RETARDED
CHILDREN

By

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CHAPTER I

INTRODUCTION TO THE GENERAL PROBLEM

It has recently been cited (Flavell and Hill, 1969) that few studies have been concerned with the concept of altruistic behavior. This seems unfortunate since much of contemporary social interaction centers on the aggressive aspects of man's character and patterns of human interaction. Our society is flooded with aggressive and selfish acts, whether it be from person to person, group against group, or from the media to the masses. In recent years, there exist such notable examples of large scale aggressive acts as political assassinations, hijacking and kidnapping of prominent citizens. On a less traumatic level, individual acts of aggressive and violent behavior are seen on a daily basis, occurring on our homes as well as in our streets. Young people today are exposed to the mass media which reports cases of aggression and counteraggression throughout the modern arena of life. Examples of such behavior can be observed at the movies or on TV (especially noting the number of police and detective shows); from the boxing ring to the roller derby; from increased incidence of assault and burglary in our streets and homes; to a large number of aggressive toys and games manufactured for children. At times, even unhappy and unstable marriages can be frightening to the child's eyes if he sees more anger and acting-out than cooperation and compromise. The pervasiveness of violence and aggression within our society almost impels the social behaviorist to study the proclivity of

our fellow man to relate to one another in a constructive, humanistic way. Perhaps one day, recognition of altruistic or helping behavior will take precedence over the aggressive acts of individuals for inclusion on the front pages of our daily newspapers.

With all the violence and ego-centrism that surrounds us, what could be a more appropriate field of study in a Judeo-Christian culture, than to investigate some of the positive aspects of man's behavior? Such as the willingness of an individual to act on another's behalf as opposed to an individual avoiding another, surely a less desirable state of personal and social involvement. How children learn to attend to the needs of others and subsequently respond to them, is a topic of great concern in understanding the roots of man's prosocial norms and behavior. One manner of studying this issue is to look at the evidence and existence of altruistic behavior, in terms of the variables which relate to or increase the likelihood of people helping others. Investigating altruism requires serious consideration, since it is becoming an increasingly important concept to the social scientist. By attaining a greater understanding of altruistic performance, the researcher will inevitably learn more about interpersonal relationships.

Significance of Studying Altruism

Although a minimum of research has been conducted suggesting the nature of altruism, interest in the topic has been reported in the literature since the late 1920's. The work of earlier researchers attempted to study some of the characteristics thought to be related to altruism within a general context of morality. Hartshorne and May (1928), Piaget (1932), and Murray (1938), report studies dealing with morality during

the 1920's and 1930's, but not with the concept of altruism per se, as it was still basically undefined by experimental research. It was not until Turner's (1948) classic study, that altruism was approached and examined as a measurable attribute of social behavior.

As Turner (1948) wrote in his study of altruism in children:

While altruisms' implications for morality, ethics, religion, and law follow from its status as general attitude or trait, as yet this status has no scientific confirmation and little study. The more a psychologist considers altruism, the greater should become his conviction that psychological understanding of it scarcely exists at all. For these psychologists who have reached this point in their thinking, the study of altruism in individual personalities and human relationships offer one broad way of further progress (p. 50).

The manner in which altruism is operationally defined and conceptualized is important in its validity as a concept. How one treats the theory of altruism is significant to an understanding of human behavior and consequent social relationships. Unless there is a workable definition or explanation of altruism, researchers obviously cannot study it objectively, attempt to observe it reliably, or report accurate findings to the socio-behavioral scientific community. It is therefore appropriate at this point to discuss the primary scientific orientation relevant to the concept of altruism as reported in the psychological literature.

According to behavioristic theory, all behavior, good or bad, is learned, and people learn that good behavior most readily produces rewarding and pleasurable effects. The acquisition of such gratifying effects may be acquired through positive reinforcement or social modeling, which are the two most salient methods of behavior acquisition. Behavior that is reinforced or rewarded tends to reoccur more frequently than behavior which is unrewarded. Several studies (Fischer, 1963; Berger, 1962; and Aronfreed, 1968) have demonstrated that when altruistic or helping

acts are rewarded, either through conditioning of positive affect or material gain, the likelihood of further altruistic acts of similar kind is increased.

Social learning, on the other hand, is a procedure for learning in which there is observation of a model and then subsequent imitation of the observed behavior. Social imitation or modeling is commonly observed in people, regardless of age. In young children particularly, observation and subsequent imitation provide a major source of learning, as they learn to talk, master physical skills, acquire attitudes, and perform behaviors which mom and dad often frown upon, although it seemed to be okay when big brother or sis did it. According to Bandura (1969), there is no question that children learn a great deal of behavior through observation or vicarious learning. The goal of the learning theorist employing this model, is to relate the process of observation of another's actions, to changes in the observers performance when he is presented with a similar situation.

Many researchers (Midlarsky and Bryan, 1967; Rosenhan and White, 1967; and Bryan and Walbek, 1969) have demonstrated that observing a helpful model encourages the observer to be helpful himself when similar situations arise. And although it would be highly unlikely to be able to single out all the exact determinants that influence one's motives to help or aid another, the social modeling paradigm must be given primary consideration. If the mentally retarded children observed in this study have had the opportunity at various times to model behavior which is helpful toward others, then, according to social learning theory, it is probable that they will be helpful in like situations.

In addition to the basic concepts of behavioristic theory, there are additional factors that may be influential as to why people help one another. Three of these factors will be mentioned briefly as discussed by Middlebrook (1974):

1. Social responsibility norms: which implies that children are taught rules of appropriate social conduct. Children are indoctrinated early to incorporate the attitudes of; "be kind to others", "help your friend Johnny", "it would be nice if you would share more often", and "why don't you give the bigger piece to Tommy?"
2. Cost analysis: which involves the cost to the individual for helping and rewards to the individual for helping. Helping behavior is more likely to result if the rewards outweigh the costs (Darley and Latane, 1970). The logical extension being, the greater or more attractive the reward, the more altruistic the behavior. However, attainment of the reward depends upon several factors. Middlebrook (1974) describes them as follows:
 - a. Type of request - degree of involvement or commitment influences the incidence of helping,
 - b. Threat of danger - encompassing the possibility for danger or degradation to the individual, be it physical or social,
 - c. Familiarity with the environment - one is more likely to help another on familiar ground, than in an environment that one is not familiar with,

- d. Financial cost - the less financial commitment or output, the greater the probability of the individual helping, and
 - e. Time pressures - if people are busy or have time commitments, they have a tendency not to interrupt their busy schedules.
3. Moods and feelings: where emphasis is placed on the internal state of the person. When a person is in a good mood and feels okay about himself, he is more likely to help another than the individual who feels bad about himself and is in a depressed mood. When people are in a pleasant mood and feel good, they seem to be willing to help others because at that time, they are relatively free from self-centered needs and are able to empathize with the needs and problems of others (Berkowitz, 1972).

Of the three preceding factors, the norm of social responsibility appears to have the most relevance to the present study. Therefore, a further clarification of its effect upon altruistic behavior seems appropriate.

The idea that people are to help or share with others is a widely accepted norm of our society. (And it is even more meaningful when no expected return rewards are anticipated.) For whatever reasons, people give to charities, donate blood, grant favors, rescue victims, and show empathy without consciously thinking of the immediate pay-offs for themselves. What motivates these people to help satisfy the needs of others? According to Freudian theory, it is suggested that the value system of the parent becomes the foundation of the child's conscience. This is accomplished through the identification and subsequent internalization of parental values during the child's oedipal stage of development. If the

parents are giving and helpful people, there will be the implied message (subtle or obvious), that the child will model or imitate the observed parent behaviors when future opportunities arise of similar nature. According to cultural norms, the social responsibility norm (Berkowitz, 1972) implies that people will help others even when there is little direct benefit for them. As Middlebrook (1974) explains, even though external incentives are obviously important in determining whether or not a person will help another, the normative approach to altruism holds that people will help even when they do not expect reciprocal or future benefits. Some internal motive may be more instrumental toward helping others, than an external material reward or social praise and recognition. An individual may be satisfied just in knowing that he did the socially right thing. Not having access to the history of the child's early socialization, but knowing the present institutions emphasis on social training skills, it would be my impression that the norm of social responsibility may well be encouraged for its own value through social indoctrination.

Before an individual decision to help, one must first evaluate the situation. This decision to help, may or may not be on the conscious level. The individual may not be fully cognizant of all the factors effecting his interpretation of the situation, or even of the fact that he is making an assessment. The decision to help may simply be a stimulus-response type reaction, as a result of previous social indoctrination. Such socially responsible actions may also be performed without conscious anticipation of expected rewards.

Whatever the reasons are that people help or give to another, a variety of factors may be involved in the actual helping behavior. Since the concept of altruism is still in the investigative stage of behavioral

research, it may be the most pragmatic approach to assume that altruistic behavior, like any other social behavior, occurs when several variables are involved simultaneously. As this study does not look to the causative or motivational determinants that stimulate altruistic behavior, further discussion of these factors will be left to my altruistic-concerned colleagues, who are conducting their own controlled and rigorous experiments dealing specifically with the development of and antecedent causes of helping behavior. The present research is primarily empirical in nature, the objective being only to investigate the subject variables of altruistic behavior among the institutionally mentally retarded. As chapter Two will attest, there are few studies indeed which deal with the question of whether altruistic behavior appears in a mentally retarded population.

Role of Altruism in Contemporary Society

To make the concept of altruism a little more meaningful to the reader, perhaps as Ribal (1963) suggests, it would be worthwhile to cite a few examples of the contemporary social perspectives of altruism, and to illustrate how social-behaviorists are involved with the dynamics of altruism.

The developmental psychologist typically defines altruism as a form of "social maturity" and the more mature an individual becomes the more he grows away from selfishness. The mental health professional often perceives the emotionally disturbed client as a product of unhealthy social relationships, where ego-centrism and selfishness interfere with interpersonal interactions. The social psychiatrist commonly sees the problems of mental health as an interaction of stresses and anxieties

engendered by the inconsistencies and contradictions about the values specifying altruism. The marriage counselor describes altruism as a condition which yields "true-love" and involves patterns of giving and receiving for both marital partners. The social anthropologist often studies and compares cultures in terms of the society's ground rules delineating patterns of sharing and receiving among its members.

As can be deduced, altruism is not a concept devoid of meaning in our everyday lives or as an area of study among behavioral scientists. Even in our most common yet intimate daily interactions, the expression of altruism finds its place.

Altruism, by its nature is a concept that involves more than one individual and is typically oriented to the giving of oneself once one has become aware of the needs of others. The act of sincere giving towards others, can take the form of an individual's time and energy, donation of body organs, money, psychological support, possessions of special value or everyday attempts to perform good deeds. Whether it involves parents and children, boss and employee, men and women, stranger and stranger, or teacher and student, there are endless opportunities to engage oneself in the expression of altruistic actions and behavior.

Although the concept of altruism has only minimally been studied in psychology with a normal child population, one cannot deny its importance to the general understanding of man's relationship to man, regardless of race, color, or intelligence of the individual. Mentally retarded individuals, who by nature of the labeling, differ from the "normal" child in various cognitive and inherited characteristics, must also be able to relate to peers and significant others on an interpersonal basis. Since so very little objective research has been carried-out on the concept of

altruism and how it is expressed by the mentally retarded, surely, social, educational and psychological researchers can still learn a great deal more about this concept.

As Rosenham (1969) summarizes the above:

We are concerned. . .with the origins of such (altruistic) behaviors, not only for their own sake but also because they appear to be progenitors of such behaviors in adults. And in adults they are not only moving but critically important, least of all, perhaps, for adult well being. . .Consider, the capacity of people to give much more than they receive (and this is how we define altruistic or generous behavior) - as parents do for children, teachers for students, lovers for each other--forms one of the likely bases of socialization, education, patriotism, love, social order and cooperative cohesion. These capacities and social structures do not arise de novo in the adult, but rather spring from childhood antecedents (p. 30).

With the growing trend in psychology today toward investigating the positive aspects of man's behavior, research concentrating on the factors involving altruistic behavior, seems to be little out of place. Altruism, one dimension of ethical or moral behavior, can well afford more attention in present research efforts. It is time to orient ourselves to the good side of human behavior, and cease concentrating on the conditions and factors which are ultimately related to antisocial and aggressive behavior.

Problem Statement

The purpose of this study is to demonstrate the mentally retarded individuals' ability to act generously, either with his time or material possessions for some worthy cause or peer group. The primary focus of the study explores the prosocial-behavioral repertoire of the institutionalized retarded child. It attempts to further clarify the relationships of IQ, sex, chronological age, and length of institutionalization

of the mentally retarded child and his tendency to respond altruistically.

Significance of Study

What is the usefulness of investigating and attempting to demonstrate the presence of altruistic behavior in the mentally retarded? Although research in the area of aggression has been studied in much greater depth than altruism, there appears to be a need to gain a broader understanding of the components, eliciting environmental conditions and the development of altruistic behavior. In comparison to aggression, minimal research has been carried-out on the topic of altruism, and what little has been done, has been oriented toward the college and "normal" elementary school child population. All "atypical" populations such as the specially gifted child, the mentally retarded child, the physically handicapped, the geriatric patient and mentally disturbed have been omitted from the investigative efforts of researchers studying altruism. It is the present researchers intention to help clarify if such variables as intelligence, age, sex, and length of institutionalization are related to expressed altruism in a mentally retarded (MR) population. As Harris (1967) aptly stated, "research must provide us with a knowledge of what environmental conditions stimulate altruistic behavior so that such conditions may be encouraged" (p. 136).

The study's goal is to contribute relevant information to the skeleton understanding of altruistic behavior and to grasp a better working knowledge of the variables involved in a mentally retarded population. Regardless of the extent of neurological impairment, the mentally retarded individual is generally diagnosed as being deficient in terms of intellectual, sensory, or motor coordination abilities. Although it is generally

assumed that social competency is an area in which mental retardates have difficulty performing adequately, their lack of attaining appropriate social skills may be more a function of inadequate training, than an inability to acquire expected social concepts. It is hypothesized by this researcher, that there is a direct relationship between an individual's development of social competency, and his opportunity to interact with others, and have others interact with him. Therefore, from a standpoint of social-cognitive development, it would be important to know if the mentally retarded child can demonstrate a concern for others, based upon his perception and empathic awareness towards meeting the needs of another individual. One central concern of this study is to contribute new information concerning the altruistic tendencies of the mentally retarded. Perhaps, in all of his numerous possible dysfunctions, the data will either add another dimension to the mental retardate's disabilities or support on his behalf one type of behavior which is not dysfunctional-- the capacity to give and share knowingly.

The social-psychological literature contains a wide range of studies which have focused on the aggressive behavior of man in our society. Such notable examples of research have been oriented toward understanding the reasons and personality attributes associated with: child abuse and neglect, rioting and protesting, increased acts of crime and delinquency, and overly competitive personality. However, it seems equally as important to focus on other aspects of man's behavior, such as the positive or helpful side of human interaction. In today's times, when it would seem appropriate to stimulate and encourage actual sharing, giving and cooperative behavior among individuals, why not attempt to gain a greater clarification of the variables involved that contribute to this behavior. If

it is at all important to help reverse the tide on the nature of research aimed at man's aggressive behavior, it is then this researchers minute contribution to help stimulate research in a far too understudied area of man, the personal willingness and commitment to aid his fellow being.

Most of the investigations on altruism in children have been of the correlational type commonly using biological variables (sex and age) on the one hand, and experimental studies using models and reinforcement on the other. Attributes of altruistic behavior in the mentally retarded child, such as IQ, length of institutionalization, and sex have not been investigated previously in an institutionalized MR population. This study explores one area of prosocial behavior, the ability to give of oneself.

Definitions of Terms

Since altruism has not yet been previously defined in this study, it seems essential at this point to discuss what previous writers have stated concerning the general concept of altruism. There seems to be many more theoretical or literary definitions of altruism in the literature than behavioral or operational definitions. This is probably a result from the historical roots of the subject, in which mention of the term was originally philosophical in usage.

Initially, the term was coined by Comte in the early 19th century. For Comte, altruism meant the discipline and eradication of self-centered desire, and a life devoted to the good of others; more particularly, selfless love and devotion to society (Dagobert, 1942). Durkheim (1951), describes the individual manifesting altruism, as one who has "no interest of his own...trained to renunciation and unquestioned abnegation"

(p. 223). Here the emphasis is on complete self-denial and sacrifice, with total concern for the other individual. This could be conceived as altruism in its purest, most literal form. Campbell (1965) professes that altruistic motives are the outcomes of both socio-cultural and biological evolution, and have a greater survival value than ones self-centered, egocentric motives.

For Rogers (1967), an altruistic individual is one who can be described as an empathetic person who perceives another's situation and intellectually understands it. Macaulay and Berkowitz (1970) define altruism as behavior carried out to benefit another without anticipation of rewards from external sources. Stated slightly different, a person can decide to help others who are dependent on him for assistance even when nothing in return is anticipated.

Leeds (1963) defines an altruistic act as having three components: a) it is an end in itself, b) it is emitted voluntarily, and c) it does good. The present researcher will use a straight behavioral definition, in that any act or behavior that helps another, regardless of the helpers motives, will be defined as altruistic. This includes both the elements (1) helping so as to be rewarded for ones efforts and (2) helping with no conscious ulterior motive or gain.

As defined in this study, altruism is a value one individual places upon the needs of another in relation to his own. The degree to which an individual overtly demonstrates unselfish concern toward others, contributing time and material possessions.

Altruism is Operationally defined as: (1) The expressed number of days volunteered to work on a coloring book project; (2) the number of pencils picked up for the experimenter; and (3) the number of material

rewards shared with peers.

Limitations of Study

1. The scope of this study will be limited to one institution for the mentally retarded, and while the characteristics of the mentally retarded population may be similar to mental retardates in other institutional settings, any generalizations made from this study concerning the altruistic behavior of other mental retardates should be extrapolated cautiously.
2. Only institutionalized mentally retarded subjects will be used in this study which excludes all mental retardates who may be living in a residential family setting.
3. The study will investigate only one aspect or component of ethical behavior, that being altruism, and the mental retardate's ability to demonstrate it.
4. Conclusions of the study will only be representative of those individuals between nine and eighteen years of age, and those whose IQ's (as measured by the Stanford-Binet and Wechsler Intelligence Scale for Children - Form R) are between 36 and 85.

Scope of the Study

It is hoped that the following questions may be answered by this study.

1. Is there a tendency for the mentally retarded child to respond altruistically more frequently than selfishly when exposed to various measures of altruistic behavior?
2. Is there a positive relationship between expressed altruism and

intelligence quotients?

3. Is there a positive relationship between chronological age and the ability to respond altruistically among mental retardates?
4. Is there a relationship between sex of Subject and ability to respond altruistically among mental retardates?
5. Is there a relationship between length of time spent in an institutional setting and ability to respond altruistically?

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Introduction

Although it is often explained through traditional Freudian psychology, that man is a selfish, ego-centered organism, with concern directed only towards self-gratification (id impulses), this is not a very humanistic or flattering portrayal. In fact, this view is a rather hedonistic and myopic appraisal of man. Situationally, as well as total life style, man can be extremely giving, charitable, and other-directed, which some theorists (Maslow, 1950; and Fromm, 1963) feel represents the healthier self-actualizing side of man. Although most discernible and measurable in human beings, the concept of altruism is also known to exist in higher class animals. Evidence is available (Rice and Gainer, 1962; Hebb and Thompson, 1954; and Nissen and Crawford, 1936) that demonstrates the animals capacity to engage in helping behavior. However, for the present review, my concern is not with the higher class animals, but with man (and specifically children), and what is empirically known about their willingness to act altruistically.

Since adulthood does not appear to spontaneously sprout blossoming, altruistic displays of behavior, one can assume that other-directedness has its roots in the social development of the child. For a child to respond in such a manner, he needs nourishment from a healthy environment,

and a strain of biological inheritances, free of gross neurological impairment. Children, who are engaged in performing simple social behaviors, are continuously developing and refining their sense of social awareness, so as to incorporate the appropriate social norms which relate to one's interaction with another. It becomes the purpose of this chapter then, to review the relevant research which investigates the child's ability or willingness to respond altruistically.

In the following sections, a literature review will be presented investigating the role altruistic behavior plays in man's social interaction with his fellowman, with particular emphasis directed toward the altruistic behavior of children. While the general range of altruistic studies using adults have varied from investigating empathy (Krebs, 1970), to sharing personal possessions (Carroll, 1969), to large scale rescue attempts (Wallace, 1956), the research using children regarding altruistic behavior has focused primarily on the sharing or donating of acquired possessions, which were obtained during the subjects' participation in the experimental tasks. The following literature review will be divided into four main sections:

1. the role of reinforcement,
2. empathy as an antecedent to altruism,
3. the effect of social modeling and subsequent altruistic behavior,
and
4. demographic variables.

Reinforcement Theory and Altruism

In reference to reinforcement theory, the two questions most likely to be asked are: 1) Is altruistic behavior influenced or conditioned by

reinforcement? and 2) Will a person help another even if a reward or praise does not follow?

According to Aronfreed (1968) and Rosenhan (1969), the ability to respond altruistically requires a history of reinforcement and the development of a self-reward mechanism. These self-rewards are generally thought to be affective in nature, and lend themselves to a predisposition to act generously, as the intrinsic rewards are reinforcing in themselves. If children experience positive affect with another, they will have a desire to be helpful as a result of the positive feedback received from the other.

Aronfreed and Paskal (1965) found that the likelihood of an altruistic act being performed is increased when the observer experiences positive affect with the recipient. They suggested that:

Pairing positive affect arousal in the giver with expressions of joy in the recipient could directly condition altruistic behavior. The recipients expressive cues of gratitude, when presented contiguously with stimuli designed to induce positive affect in the observer, became conditioned stimuli for positive affect arousal, which reinforced the child for his self-sacrifice. Altruistic behavior is thus attributable to the conditioning of positive affect to the observations of the pleasurable consequences of the act for the beneficiary (Bryøn and London, 1970, p. 201).

Three treatment conditions were designed to test Aronfreed and Paskal's hypotheses. A subject (S) was placed in front of an apparatus which contained two levers. If the child pressed one lever, the subject would obtain a piece of candy on a sixty percent probability schedule. Depressing the other level would cause a red light to come on with a similar probability schedule. During the pre-testing session, an experimenter (E) positioned himself next to the subject and responded in one of three treatment conditions each time the light came on. In group one, the

experimenter reacted by saying, "there's the light," followed by a hug and a smile; in group two, the experimenter responded with just a hug and a smile; and in group three, he expressed only a verbal reply of "there's the light." During the actual experimentation, the light on the child's apparatus was disconnected, while only the experimenter had access to another operative red light. With the onset of the light, the experimenter responded with "there's the light," while pressing the other level, the child received a piece of candy. Major results indicated that the child who observed the experimenter's reactions of "joy" and his subsequent display of affection, were more likely to sacrifice candy rewards, than those who either observed the expressive cues alone or received the affection alone. The subjects were willing to give away their candy rewards to experience joy (positive affect) in the experimenter.

Midlarsky and Bryan (1967) repeated the experiment, in an attempt to replicate the results of Aronfreed and Paskal (1965). They studied the degree to which children internalize charitable behavior (making donations to needy children), and their willingness to give up candy rewards to attain expressive responses from the experimenter. As in the above study, the combined effects of expressive cues ("there's the light") and expressive responses (a smile and hug), were greater than either alone in producing charity.

In a study conducted by Fischer (1963), results indicated that four year olds are more apt to share their rewards with an unfamiliar peer if they were reinforced with bubble gum. In Fischer's (1963) study, pre-school children were trained in the acquisition of a sharing response. Depending upon experimental conditions, the subjects received either

verbal or material reinforcements. Reinforcers were acquired by subjects, provided they gave marbles to a pictured child displayed in the apparatus. The subject was seated in front of the apparatus and was asked to make a donation of his marbles to the pictured child. If he did so, the subject was reinforced with bubble gum. Several experimental trials were run with the subject until he had shared at least one of his marbles for ten consecutive trials. Extinction trials were run on the day following the one in which the subject met acquisition criteria. General conclusions to the study were: 1) material rewards were more effective than verbal-expressive reinforcement, 2) there is a strong relationship between intelligence and the rate at which the child learns to share, and 3) the number of marbles shared by the child increased steadily. Essentially, Fischer (1963) found that sharing behavior is primarily a giving up of one reward for the promise of another.

Aronfreed (1970) states that empathy may also reinforce altruism. Once the child learns to empathize with others, that is, to experience their thoughts and feelings, his empathy or understanding of what the other person is experiencing, may allow for another source of reward or punishment. If one can feel another's joy or sorrow, it is possible to help increase his joy or help to reduce his sorrow.

The aforementioned studies attempt to cite the evidence that altruistic behavior is related to a function of reinforcement or rewards, whether it be external or internal to the individual.

Empathy and Sympathy as Antecedents to Altruism

Sympathy and empathy are two related terms that are sufficiently similar to the meaning of altruism that they need to be briefly mentioned and discussed in the present literature review.

As Murphy (1943) expressed in her study of children's social behavior,

Sympathy, when it is sensible and genuine, not merely a projection of the sympathizer's anxiety or a way of dominating others, is intimately connected with all the other responses of a friendly and constructive nature that are the foundations of a cooperative society (p. 345).

Murphy studied nursery school children and their responses to another child's distress. It appeared that children do render supportive responses to other children, which results from an identification with the child in need. She concluded that the observer child regards what happens to the other child as if it were happening to himself. Although sympathy is not a synonym for altruism, Murphy's (1943) study is relevant because it shows that even in the normal child's early developmental years, he is not entirely ego-centric or self-centered. Although sympathy really only involves intellectualizing another's situation or dilemma, it is the forerunner of acting altruistically. For without the ability to extend an "open-ear" and feel compassion for another's discomfort, it is most doubtful one could follow through with actual, overt altruistic behaviors.

Aronfreed (1970) maintains that empathy may reinforce altruism, as it allows one to feel another's joy or sorrow. There are internal self-rewards in helping to increase another's happiness, as well as attempting to reduce another's sorrow.

Lenrow (1965) suggested that both the child's ability to experience distress and to overcome environmental obstacles are important factors of subsequent rescue activity. A puppet show was staged for thirty-three nursery school children whose reactions were observed. The child was introduced to a same sex hand puppet, who was talked to be the experimenter as if the puppet were real. The puppet and child interacted briefly, playing with a pleasant sounding brass bell, which the puppet ends up giving to the child as a present. The puppet then audibly whispers to the experimenter that he must go home, and that he enjoyed playing with the child. The puppet then said good-bye and left. The experimenter told the subject that he could watch the puppet walk home if he wanted to, but that the experimenter would have to leave the room for awhile and would return shortly. The experimenter left as the puppet began walking home through a wooded area. The experimenter provided for a series of obstacles that are encountered by the puppet as he is walking home. Help is offered by another puppet along the way, but without success. Finally a witch appears and threatens to prevent the puppet from getting out of the woods unless he gives her a present. The witch leaves, and while gone, the puppet asks the subject if he would give up his present so that he can get out of the woods. The experimenter observed from a one-way mirror and returned to the child after he gave up his present. The obstacle was removed and a happy ending ensued. Results showed that the more the child became involved in the puppets dilemma, the greater was his intensity to reduce the impending distress. Empathic experiences appear to play a significant role in producing helpful acts.

According to Liebhart (1972), the degree to which empathy results in helpful behavior depends on several different variables. The extent

to which the observer identifies with the recipient; and the tendency to reduce the unhappy feelings of those in distress, resulting in decreasing one's own feelings of discomfort; are two primary factors which can increase the extent of altruistic behavior. Liebhart's study seems to lend support to both Lenrow's and Aronfreed's conclusions.

Empathy can also form the basis for altruism as explained by Krebs (1970). Physiological reactions of subjects who observed an experimental confederate receive rewards and punishments were measured. Some of the subjects were told that they were similar to the confederate, and others were not told that they were similar. Results showed that "similar" subjects evidenced greater physiological reactions to the confederate's plight, reported more feelings of empathy, and behaved more altruistically. One factor which appears to increase empathic or altruistic behavior is the helper's relationship to the victim. The more acquainted one is with another, the greater the likelihood that one would come to the "known" other's aid, over that of a stranger. This variable will probably have an effect on the subjects of this study, since they will be asked to perform a charitable deed for familiar recipients, although no specific names will be available. They will only be informed that their efforts will benefit other children at the institution in the four to five year old range.

The Effects of Social Modeling

Several investigators have explicitly indicated the importance of social modeling to the acquisition of altruistic behavior. The observation of models, according to Bandura and Walters (1963), effects behavior in two distinct ways: 1) by providing the basis for a long-term

behavioral repertoire, and 2) by allowing new behaviors to occur through imitative efforts. It is assumed that the model represents a parent figure, from which the observer identifies with. This is known as the process of internalization, and if the identification is made, the modeling effects should theoretically produce alterations in one's behavioral repertoire.

For one to act altruistically does not automatically imply that the individual must internalize a value system to such an extent as those life philosophies associated with such humanists as Albert Schweitzer, Mahatma Ghandi, Abraham Lincoln or Martin Luther King. The implication is that one can act situationally altruistic without being a totally committed, self-sacrificing individual. Examples of situational altruistic deeds may be: Giving aid to an accident victim, helping someone change a flat tire, assisting a blind person across a busy street, donating a pint of blood, or rescuing an innocent victim from an assault or attack. The actual helping or altruistic response often refers to situation-specific behavior which results from the helper's temporary mood, time or danger investment, vicarious learning or identification with the recipient. Many individuals express altruistic behavior in very ordinary and often unconscious ways, without being completely cognizant of the antecedent motivations inducing such behavior. Often the person responds altruistically by simple reflex or because of the individual's immediate assessment of the situational variables, attaching meaning to the situation as a result of previous modeling or observational efforts.

Several studies (Rosenhan and White, 1967; Hartup and Coates, 1967; White, 1967; Bryan and Test, 1967; M. Harris, 1968; and Midlarsky, Bryan and Brickman, 1973) have dealt with the assumption that the presence of

social models, whether peer or adult, may influence altruistic behavior. Regardless of the type of research design used with children in social modeling situations, the goal has been to expose the child to conditions in which sharing and helping is possible, either toward known peers or toward a more general "other" such as the poor or underprivileged. Here the researcher views the potential for altruistic behavior as a result of social reinforcements, identification with models, and providing opportunities to rehearse with and observe models act altruistically.

The role of observational learning has been shown to be highly effective in developing charitable and helping behaviors in children. Aronfreed (1969) believes that children acquire many of their stable patterns of social behavior on the basis of their observation of a social model which can lead to behavioral as well as attitudinal change in the child.

White and Rosenhan (1966) found evidence that social models are influential in producing charitable responses in children. They demonstrated that the observation of a charitable model would increase the likelihood of the observers making donations to a fictitious orphanage.

In a later experiment exploring the antecedents of charitable behaviors, Rosenhan and White (1967) assigned fourth and fifth grade elementary school subjects to one of four pre-experimental conditions. Conditions were either: 1) negative reinforcement, 2) positive reinforcement, 3) no interaction, or 4) no model control condition. The subjects were allowed to play with a miniature bowling game, which served as the task through which subjects could win money certificates. The subject played the bowling game, both in the presence and absence of an adult model. The subject interacted briefly with the model in one of the four

pre-experimental conditions, prior to playing the bowling game. During the game play with the model present, each time the model won money certificates, he donated half of them to the charity box labeled "Trenton Orphan's Fund," which was placed next to the subject. The treatment subjects, who did not observe a model, contributed to the charity while playing alone. Results indicated that observation of a giving model could elicit more donating behavior than that of the no-model condition, whether in the model's presence or absence.

Hartup and Coates (1967) supported the results of the Rosenhan and White (1967) study, finding that subjects exposed to an altruistic peer model displayed significantly more altruism than subjects not exposed to a model. In this study, the subject watched a model solve some simple puzzles and receive trinkets as a reward for the correct solution. The model always put one trinket in his box, and five trinkets in the classmate's box. Completing the task, the model left the room. The subject was then invited to play the game by himself, and the experimenter scored how many trinkets the subject put in the peer's box. It was concluded that the subjects who watched the model were significantly more giving than control subjects who had not observed the model. An interesting study by White (1967) compared the effects of coercive instructions and the model's behavior upon the child's charity responses immediately and after several days following the treatment conditions. Fourth and fifth graders were exposed to one of four treatments while playing a bowling game. They were instructed either to donate half their winnings to an orphanage (forced rehearsal); or to observe a model donate his winnings with an opportunity then to donate their own winnings (observation and voluntary rehearsal); or they watched a generous model but were not

observed themselves; or a no-model control condition, in which the subject neither received instructions nor observed a model. Half of the subjects from the first three treatment conditions and all the subjects from the control condition were left alone to play the bowling game and to donate. All subjects returned for a second testing after several days, with a brief reminder of the instructions and subsequent game played with donations. White (1967) concluded that children in the verbally encouraged condition gave more in frequency and amount than the subjects in any of the other treatment conditions. This outcome held, however, only when the groups were tested immediately after receiving treatment conditions. After a posttest of one week, White found that the impact of forced rehearsal had declined to such a point that there were no differences between the subjects who were conditioned through observation of models and those instructed to give. In fact, beyond a week, children who were told to donate actually gave less than the "observe the model" subjects.

A study by Bryan and Walbek (1969) investigated the relative strengths of behavioral and verbal exhortations on donating behavior. Elementary school children were involved in one of six treatment conditions. They observed models who practiced greed and preached either charity, greed, or gave a neutral response, or they observed a model who practiced charity and preached either charity, greed, or gave a neutral statement. A series of experiments indicated that the behavioral example did influence the number of children willing to contribute their winnings to disadvantaged children, and that the verbal preaching conditions consistently failed to increase or decrease contributions. In essence, behavior or actions speak louder than words, for it was what the models did that affected the responses of the children. From a more recent

study by Midlarsky, Bryan and Brickman (1973), the researchers focused their attention on the role of models and reinforcement in altruistic behavior. It was predicted that a charitable model will be more effective in reinforcing donation behavior than will a selfish model. The researchers reasoned that: 1) a charitable model would be better liked and more highly valued by the children, and 2) a charitable model's reinforcement of donation behavior toward the children is consistent rather than inconsistent with his own behavior.

Seventy-two girls were randomly assigned to one of six treatment conditions (employing a pinball machine, prizes, and a poster marked, "The Denver Children's Fund") intended to elicit subject donations. After the model demonstrated the pinball machine task, she behaved in one of three ways, either donating the chips she won (donating), keeping the chips she won for herself (selfish), or abstaining from collecting her winnings (neutral). The subject was then allowed to play the pinball game, as the model stood by watching. Twenty trials were allowed. During the first ten trials, the model insisted that the subject donate her winnings, while during the second ten trials, the model expressed either social approval for donating or no verbal approval. Results of the Midlarsky, Bryan and Brickman (1973) study indicated that the amounts donated by the subject when exposed to an altruistic and neutral model, were greater than the donations of subjects exposed to the reinforcements of the selfish model.

As the data indicates, observation of a charitable model facilitates donating or altruistic behavior. In addition, observation of an altruistic model and rehearsal in his presence appears to increase the probability that the model's charity will be internalized by the child.

Although observations of models in helping or charity situations increases the likelihood of the observer repeating the overall responses set of the model in forthcoming like situations, little is actually known of the means by which this behavior is acquired. One explanation is that models remind the child of the social responsibility norm (Berkowitz, 1972), in that people will help even when they do not expect any material reward. Identification with the model may yet be another possible explanation. The more one identifies with the model (overtly or covertly), the greater the likelihood that the observer will incorporate the meaning of the helping or charitable behavior, thus, acting in similar fashion when the situation presents itself again.

Demographic Variables

Researchers who have studied individual differences with regards to altruistic behavior have frequently investigated those characteristics within individuals which might be expected to account for variations in the patterns of responding altruistically. Demographic variables such as sex, age and IQ have most frequently been studied as correlates of altruism. Although length of institutionalization has not been a variable previously investigated, its inclusion in the present study may lend support to the possible effects of the continual social interaction and subsequent social modeling of one's peers. Although the above mentioned variables have been studied on normal school age children, no investigation has attempted to relate them to the mentally retarded and their propensity to demonstrate altruistic behavior.

Chronological Age and Altruism

There exists strong support that altruistic behavior or sharing is related to age (Handlon and Gross, 1959; Midlarsky and Bryan, 1967; Wright, 1942; Ugeril-Semin, 1952; and M. Harris, 1968). Although there is confirmation that sharing behavior increases with age (especially the first decade of life), research efforts have not clearly defined at what developmental stage consistent sharing and helping others takes place. Inconsistency in the age-related finding appear to depict the norm.

In a classic study by Ugeril-Semin (1952), an attempt was made to research the relationship between age (among other variables) and the willingness to act generously. A nut-sharing situation was used to experimentally test the children. The experimenter required a child to divide an unequal number of nuts between himself and another child. Ages of the subjects ranged from four to sixteen. The experimental procedure was designed so that the children were to be seated at a table and across from each other. The nuts were placed on the table and subject one was told that he would be sharing them with subject two. Subject two was then asked to leave the room before subject one divided the nuts, verbally explaining to the experimenter how he would do so. Subject two was called back to the table, and subject one was instructed to divide the nuts in front of subject two. Findings revealed that children in the four to six year age range kept the greater share for themselves, while eight year olds gave the greater share more frequently to the other child. The older children (twelve to sixteen years old) more frequently made near equal divisions. Results allude to the relationship between chronological age and the ability to respond generously.

Handlon and Gross (1959), studied overt sharing behavior among elementary school children, investigating sharing as a function of age, sex, and number of siblings. The experimental procedure involved sharing with an absent peer while in the presence of an adult. Pennies and toy seals were used as reinforcers, earned by performing a cooperative task. The children were asked to divide their five rewards with their partner. The researchers' conclusions were: age is significantly related to sharing behavior, resulting in more sharing by the older children; and transition from keeping the larger amount to sharing the larger amount took place around the years ten to twelve. According to Handlon and Gross (1959):

The willingness, given appropriate circumstances to share one's possessions with others is commonly regarded in our culture as a mark of maturity, and empirical studies have demonstrated a relationship between sharing behavior and chronological age (p. 695).

Wright (1942) also found that children's sharing was related to age. She provided children who were eight and eleven years old eight toys, four of which were very attractive. The child was asked to share four of the toys with another child. Responses were classified as to generous, fair, and selfish. The eight year olds responded more generously than the older eleven year olds, although the latter group divided the toys up on a more equal or fair basis.

A positive relationship of age and altruism was reported in other research efforts as well. L. Harris (1967) had elementary school children, grades two through six, respond verbally to incomplete story-situations. The verbal response required from an incomplete story-situation provides an opportunity for subjects to speak freely, or express his true feelings without suffering societal disapproval. The children were

asked to make a decision on each of the following three story summaries:

1. Susan lends her bicycle to her sister Mary, and later decides she wants it back. What should Susan do? Satisfy her own needs by repossessing it or letting Mary use the bike, as previously agreed.
2. Jerry is planning to play baseball with his friends, just when his mother asks that he stay inside and attend to a chore that requires his presence. What should Jerry do, stay home or go ahead and play baseball?
3. Bill can win a trophy with his high batting average that he obtained playing little league baseball. The championship game is being played and Bill is up to bat, with one man on third base, and one out. What should Bill attempt to do, try for the big hit and trophy or try for a bunt, and allow his team to tie the score?

Results indicated that there is a tendency for children to respond altruistically to incomplete story situations as related to chronological age. It appeared that older subjects were more willing to attend to the needs of others, being less selfish in their immediate satisfactions, than the younger children.

In a study of age differences regarding altruistic behavior, Green and Schneider (1974) used 100 parochial school boys, ages five to fourteen, in a design employing three measures of altruism. The three measures designed to test altruism were: 1) sharing candy with peers, 2) giving physical assistance to the experimenter, and 3) volunteering time to work for needy children. In general, the sharing of candy increased with age as did giving physical assistance to the experimenter, in terms

of helping to pick up pencils which had dropped to the floor for the experimenter. However, there were no significant differences found in the subjects' efforts to volunteer their time to help needy children. The overall conclusion was that generosity or attending to the needs of others, increases with age at least during the first ten years of the child's social development.

For the majority of students, results tend to indicate that altruistic behavior increases with age. The younger children in the studies consistently scored lower than their older counterparts. As Bryan and London (1970) explain the above findings in terms of Kohlberg (1963):

This change in generosity is interesting as it appears to accompany alterations in the basis of moral judgment. It is possible that older children are more generous than younger not only because of the greater opportunity to learn this culturally valued activity, but because they may be shifting the basis of moral judgment from a hedonistic position to one emphasizing social approval (the "good-boy/nice-girl" morality) (p. 207).

From the social modeling perspective, the older the child, the greater has been the opportunity to observe and copy models who acted altruistically, as well as be reinforced for demonstrating altruistic or generous responses.

Sex Differences in Altruism

In general, the support that sex differences exist in relation to helping or sharing behavior is minimal at best. The prevailing expectation that girls are more generous than boys was supported to a degree, although studies have also reported where the reverse was true. The conclusions appear to be relatively inconsistent and contradictory. In the

Handlon and Gross (1959) study, no significant differences between sex of child and willingness to act generously was found. This findings was also demonstrated in the studies of Wright (1972) and Ugurel-Semin (1952) which were mentioned in the preceding section.

In a study employing a pledge and donation task using school age children, Bond and Phillips (1968) found that there were sex differences in expressed altruistic behavior, concluding that boys were more altruistic than girls, in donating their M & M rewards. Arnal and Del Oma (1960) and White and Rosenhan (1966) also support the conclusions of Bond and Phillips, that boys are more giving than girls. In the follow-up study by Rosenhan and White (1967), they found a tendency for fourth and fifth grade boys to give more than girls after previous interaction with a female model when the model was absent during the giving period. White (1967), on the other hand, found that girls gave more than boys after the passage of time, especially after experiencing the observation of an altruistic model and rehearsal of giving responses while in their presence.

In a study by Ruderman (1962) investigating the ability of children to respond empathically, she concluded that: 1) there is a tendency for empathy to increase with age, 2) that there are no sex differences, and 3) there is a slight relationship between empathy and intelligence. As can be noted from the above research efforts, there appears to be no clear confirmation in the conditions which affect sex differences in children and their readiness to express altruistic behavior.

Intelligence as a Determinant of Altruism

In studies investigating the relationship of intelligence to altruism, Ruderman (1962), Fischer (1963), Turner (1948), and Murphy (1937), found in their research of empathy, altruism and sympathy, respectively, that intelligence is an important attribute to acting altruistically, but that one needs more than just intelligence alone.

Intelligence, as well as social sensitivity, seem to be valuable traits for one's awareness of the social surroundings, and crucial to an effective meaningful interaction with others. Although not the only organismic variable for meaningful interpersonal interaction, intelligence, at least contributes to the individual's ability to respond altruistically toward significant others.

A contrary view is expressed by Sorokin (1950). He reports that intelligence as measured by mental tests do not appear to be a significant factor in making human beings either altruistic or egoistic (selfish). He does contend that a slight relationship may exist with high intelligence favoring altruism. However, whether or not intellectually brighter individuals demonstrate altruistic behavior more frequently than less intelligent individuals, is still a matter of considerable debate. There is the possibility that while intelligent individuals demonstrate socially accepted and expected behavior in a multitude of situations, the acquisition of an ethical-moral value system may be founded upon motivational determinants, as opposed to strictly intellectual or cognitive determinants. No concrete data is presently available that supports a significant relationship between intelligence and altruism.

Since the relationship between intelligence and degree of expressed altruism has not been adequately documented one way or another, it is this researcher's intent to further explore the possible variables and obtain data on the relationship between IQ and altruism among the lower ranges of intellectual development. Although the mentally retarded individual by definition, is only able to achieve a certain level of intellectual capacity, does this imply that his expressions of altruism or unselfish concern for others is hindered by his limited intellectual functioning? Carroll (1969) investigated the mentally retarded adults' ability to share one's possessions, and found that IQ is a factor in the sharing of one's personal belongings. She observed 71 mentally retarded female institutionalized patients with IQ's ranging from four to 71. She discovered that personal possessions had considerably different meanings for different mentally retarded level patients. In reference to giving to others, the higher level patients were less possessive of their belongings and more readily lent them out to others. The middle IQ group was most possessive. They would not lend their possessions and became upset if anyone picked them up. The lower IQ patients were also possessive of their belongings (not willing to share or lend objects), but were easily distracted from their belongings.

Since practically all the research investigating altruism in children have been carried out on non-retarded populations, the inclusion of these studies will have to make up the literature review. This, however, makes generalizing to mentally retarded children's altruistic ability somewhat in question, which in turn, lends increasing support to the relevance of the present study.

Handlon and Gross (1959) and Durkin (1959) concluded from their research that no definite relationship can be inferred concerning the function of intelligence in the development of moral judgment of "normal" grade school children. On the other hand, Fischer (1963) found that more intelligent children learn to share at a more rapid rate than less intelligent children. M. Harris (1968) concluded that children are capable of exhibiting altruistic responses although inconsistently from situation to situation, and that intelligence is unrelated to altruism. Kohlberg (1969) states that intelligence scores and cognitive ability are poor predictors of initial moral judgment maturity scores. Whether or not intelligent individuals are more moral and altruistic than less intelligent individuals is still not clearly established. Handlon and Gross (1959) report that very little consistent evidence shows that there is a relationship between altruistic behavior and intelligence.

Gunzberg (1965) approaches the relationship between intelligence and appropriate social skills somewhat differently by stating that it is not the mental retardate's fault that he cannot attend to more expected social skills and concepts. It is the systematic inadequacy of society to teach mentally retarded children anything but the most elementary type of social development. Until the issue is resolved, the intelligence factor is still an important variable for research as long as the relationship of intelligence to ethical development has not been clearly resolved.

In summary of the correlational studies investigating the variables of age, sex, and intelligence, the following statements recapitulate the general conclusions most often found when comparing the data of the previously cited studies:

1. that most of the studies failed to find sex differences in expressed altruism,
2. that most studies support chronological age development as being related to the ability to respond altruistically, and
3. that most of the studies conflict with one another when evaluating the role of intelligence and altruism.

As mentioned previously, there are only a limited number of studies which specifically deal with altruism as it relates to children, and even fewer that attempt to explore the relationship between altruism and mental retardation. One such study on mental retardates needs mentioning. In a study of helping behavior comparing normals and mental retardates in a natural setting by Severy and Davis (1971), they concluded that retarded children engaged in more psychological helping (showing concern for the emotional upsets of known peers) than "normal" children. A second finding showed that although older retardates and younger normals engaged more frequently in attempting to provide help to peers, they only succeeded in a limited number of cases. Perhaps this is due to their underdeveloped social skills. Although this study does yield evidence of helping behavior as demonstrated by the mentally retarded, it has not been sufficiently reported in the literature that mentally retarded individuals have a clearly identifiable concept of altruism of self-sacrificing behavior.

The evidence with respect to age, sex, intelligence, and altruism is not consistent from one study to another. Although many research efforts do allude to the assumption that the predictor variables are related to the dependent measures, altruism. The variables of length of

institutionalization has not been studied with respect to the expression of altruistic behavior in the mentally retarded.

Although several methods have attempted to assess the concept of altruism, from paper and pencil tests, to behavioral approaches, to ratings of others, all of these methods have inherent weaknesses. While problems exist in the subjectiveness of most rating scales, and paper and pencil tests have no real check for criterion-reference validity, behavioral measures have difficulties with operational definitions. Because of these issues, continued efforts to study altruism seems justified in an attempt to further clarify, redefine, or construct more appropriate techniques for the measurement of altruistic behavior. According to the "grandfather" of altruistic research, Sorokin (1950) claims we must still pursue this area of research since it is so important to the development of good mental health, which in turn leads to positive and satisfying interpersonal relationships. As reported in Krebs (1970), altruistic children seem to be better adjusted socially than others and are more emotionally stable.

The investigation of altruistic behavior must be pursued and explored with the same intent and experimental rigor as any other type of human behavior, taking into consideration a wide-range of variables such as the individual's needs, socialization, parental-rearing patterns, situational pressures, sex, intelligence, developmental age, and social popularity to list but a few. It is this researcher's intent to contribute to the growing concern of investigative efforts emphasizing man's more constructive and positive behaviors. It is hoped that this study will contribute some meaningful information to a far too understudied

area of man's social and moral behavior: the existence of altruism as a part of man's behavioral repertoire.

CHAPTER III

RESEARCH METHOD AND DESIGN

The material presented in the following chapter describes subject selection, procedure and directions for experimental tasks, scoring of criterion variables, mention of the null hypotheses, and a discussion of the statistical treatment of the data.

Description of Subjects

A sample of 104 subjects were selected for participation in the present study. All subjects resided at Hissom Memorial Center for the mentally retarded in Sand Springs, Oklahoma. For inclusion in the study, subject selection was based on three criteria:

1. subjects were between the chronological ages of nine years, one day to eighteen years, one day;
2. received a full scale IQ score between 36 and 85 as reported by the Stanford-Binet and Wechsler Intelligence Scale for Children - Revised standardized intelligence tests; and
3. have maintained residence at the Center for a minimum period of 366 days.

Subjects were studied in reference to the predictor variables of IQ, chronological age, sex, and length of institutionalization. Predictor variables were classified into the following groups:

IQ	36-54	55-85	
Sex	male-female		
Age	9-11	12-14	15-18
Institutionalization	2 years	3-4 years	5+

Table I shows the subject distribution.

TABLE I
DISTRIBUTION OF SUBJECTS FOR EACH PREDICTOR
VARIABLE

Sex	Intelligence Quotient	Chronological Age	Length of Institution- alization
Females: N=49	High IQ: N=48	9-11 yrs: N=30	0-2 yrs: N=34
Males: N=55	Low IQ: N=56	12-14 yrs: N=37	3-5 yrs: N=35
Total = 104	Total = 104	15-18 yrs: N=37	6+ yrs: N=35
		Total = 104	Total = 104

Criterion variable was the amount of altruism expressed by each subject. Measures of altruism were: 1) volunteering time to work for other peers, 2) giving physical assistance to the experimenter, and 3) sharing reward with other peers.

Procedure and Directions

Design was based on the procedure of Green and Schneider (1974) in their study of altruism on "normal" male, elementary school children. All subjects in the present study were tested individually at the Hissom

Memorial Center. The first experimenter (female) brought the subject into the test room where the second experimenter (male) was seated at the task table. The first experimenter introduced the subject to the second experimenter saying, "(subject's name), this is (second experimenter's name). He wants to visit with you about an important job. I'll be back in a few minutes and then I want to visit with you, also." The first experimenter left the room. The second experimenter invited the subject to sit down in the chair positioned next to him. He proceeded by saying, "How have you been today?" "How old are you?" and "Do you like going to school?" These three introductory questions were used to familiarize the subject with the second experimenter and to decrease possible anxiety of the subject due to the novel setting and interaction with a previously unknown adult. The second experimenter proceeded by saying:

Phase 1:

Let me tell you about an important job that must be done. I am making a coloring book for the little children here at the center, children who are four or five years old. How old are you? (Wait for response.) So the children are a lot smaller (demonstrate by hand gesture) than you. The coloring book is going to have all different kinds of animals, and it is to help the children learn what color each animal is. Let me show you the pictures. (The experimenter reaches for the pictures and names each animal.) Here is a lion, and a giraffe, and a monkey, and a deer, and an elephant, and a hippopotamus. These are the animal pictures for the children's coloring book; not for you, but for the little children. After I pick these pictures up, I can put this blue piece of paper on the bottom, and this yellow piece of paper on the top. Then I can staple it like this (demonstration), and put a label on the yellow side, which says, "Coloring Book" (demonstrates how to lick the label and position it on the yellow cover). Then I can open the book, and what do I have? That's right, an animal coloring book, for the little children to color in.

Now, what I want to talk to you about is whether you would like to help pick up all these pictures (pointing to each animal picture), and make lots and lots of coloring books. You do not have to help make these coloring books if you don't want to, or if you want to, you can help make

the coloring books for the little children. Remember, you don't have to help if you don't want to. Now, let me explain this to you before you decide to help or not. It will take about five days to put all the books together, and I want to begin next week. I will only be here during your lunch period, so you will have to miss part of your lunch period if you decide to help. Let me stop and ask you a question. So I know you understand all about the coloring book job, tell me what is involved in making the animal coloring books. (Pause, wait for response.)

Now, what would you like to do, help make the coloring books, or not help make the coloring books? (Wait for response.) (If the subject replied with a negative response, the experimenter went on to phase 2; if the subject replied affirmatively, the following was said.) OK, now, how many days do you want to help with the coloring book job, (the experimenter, counting slowly on his fingers) one day, two days, three days, four days, or five days? (Wait for response.) (On alternate subjects, the experimenter reversed the counting of days, starting from five days, to avoid the possibility of the subject simply responding to the last number heard. The experimenter repeated the number of days volunteered out loud, and continued by saying:) OK, you want to help _____ number of days. Now, what I need to do is to write your name down on this piece of paper so I can remember your name, and how many days you want to help with the coloring book job.

Scores on the first phase of the study could range from zero to five.

Phase 2:

(The experimenter is reaching for a sharpened pencil from the pencil holder, but finds that none are sharpened.) Gee, I don't have any of my pencils sharpened. I will go and sharpen one, so that I can write your name down. I'll be back in just a minute. (The experimenter stands up and takes one of the ten pencils, and as he is lifting the pencil from its container, accidentally knocks over the entire pencil holder. The pencils naturally fall to the floor, and the experimenter responds by saying:) Oops, (raising his hands and shrugging his shoulders), I'll be right back. (The experimenter leaves the room, closing the door behind him. A thirty second delay is allowed before the experimenter re-enters the experimental room. Upon re-entering, the experimenter responds with:) Gee, thanks for picking up the pencils. Now, let me see, your name is _____, and you are going to help with the coloring book job for _____ days. (If the subject did not pick up the pencils, the experimenter proceeded to do so, and then wrote down the name and number of days volunteered.)

OK, (subject's name), that is all I want to talk to you about, but I have a friend whose name is Mary (first

experimenter), and I want you to talk to her for a few minutes. After that, you can go back to the cottage. Mary is in the room across the hall, so let's go and talk with her for a little while. The coloring book will probably begin sometime next week. OK, let's go and talk to Mary. (The experimenter escorts the subject to the second experimental room, where the first experimenter is waiting for the child.)

The number of pencils picked up for the second experimenter was the second measure of altruism in the study. Scores could range from zero to ten.

Phase 3:

(The second experimenter introduces the subject to the first experimenter.) "Mary, this is (subject's name). (The second experimenter exits, closing the door behind him. The first experimenter replies:) Hello, (subject's name). Come over here and sit down (pointing to the chair). (Pause.) I have here five pieces of bubble gum, and five red candy sticks. Which do you like the best? (Wait for response.) OK (pushing the preferred candy choice close to the subject, and removing from sight the candy not chosen), this is your reward for coming in and talking to David about the coloring book job. This is your candy. However, some of the children here won't get to come in and talk to David about the coloring book job. Therefore, they will not get any candy or gum. Let me ask you this, do you know what it means to share? (If the subject replied affirmatively, the experimenter replied:) Tell me what sharing means. (Wait for response.) (If the subject responded negatively to the question, the experimenter briefly explained to the subject what was meant by sharing.) Now, if you want to, you could share or give some of your candy away to the children who will not get to come in and talk to David. However, you do not have to share or give any candy away if you don't want to. It is OK if you don't want to give your gum (or candy) away. Now, let me explain these two paper sacks that are here in front of you. One of the sacks says "yours" and the other one says "a friend." (The experimenter pointing to each as she describes them.) If you want to, you could give away one piece of gum (or candy) (moving the candy to the friends sack), or you could give away two pieces of gum, or you could give away three pieces of gum, or you could give away four pieces of gum, or you could give away five pieces of gum, or all of it. Or you could keep one piece of gum for yourself (moving the gum (or candy) to the sack labeled "yours"), two pieces of gum for yourself, three pieces of gum for yourself, four pieces of gum for yourself, or five pieces of gum for yourself. Now, I am going to leave the room (in this manner, the

subject could divide his reward without the pressure of being observed), and while I am outside, I want you to put into this sack ("yours"), the gum (or candy) you want to keep for yourself, and into this sack ("a friend"), I want you to put in the gum (or candy) that you want to share or give away to the other children. Remember, it's OK if you do not want to give any of your gum (or candy) away. OK, I will be back in a little while. (The experimenter leaves the room, closing the door. She remains outside the room for thirty seconds before re-entering. Upon re-entry, the experimenter says:) OK, that's all, you can go back to the cottage now. We're going to keep your sack of candy (or gum) here for awhile, and give it to you next week when we come back to the center and begin working on the coloring book job. (The experimenter escorts the subject out of the test room.)

Reward sharing comprised the final measure of altruism. Scores could range from zero to five.

Upon completion of the data collection, the experimenters returned to the subjects the following week, and expressed their regret that the coloring book project could not be made for the children after all. The rewards were distributed, and the experimenters thanked the subjects for coming to talk with them.

Due to the variation in cognitive abilities of the mentally retarded, the basic format of phases one, two, or three was altered, only if the experimenter felt that the experimental tasks were not being clearly understood. At that time, either a more simplified or repeated explanation was offered.

Null Hypotheses

The following null hypotheses were tested at the .01 level of significance:

1. There is no significant relationship between the altruistic content of responses and intelligence of the subject.

2. There is no significant relationship between the altruistic content of responses and chronological age of the subjects.
3. There is no significant relationship between the altruistic content of responses and sex of the subjects.
4. There is no significant relationship between the altruistic content of responses and length of the subjects' institutionalization.

Further Specification of the Null Hypotheses

- 1a. There is no significant relationship between the volunteering of one's free time and intelligence quotient (IQ) of the subject.
- 1b. There is no significant relationship between giving physical assistance to the experimenter and IQ of the subject.
- 1c. There is no significant relationship between the sharing of rewards and the IQ of the subject.
- 2a. There is no significant relationship between the volunteering of one's free time and the chronological age of the subject.
- 2b. There is no significant relationship between giving physical assistance to the experimenter and the chronological age of the subject.
- 2c. There is no significant relationship between the sharing of rewards and the chronological age of the subject.
- 3a. There is no significant relationship between the volunteering of one's free time and sex of the subject.
- 3b. There is no significant relationship between giving physical assistance to the experimenter and sex of the subject.

- 3c. There is no significant relationship between the sharing of rewards and sex of the subject.
- 4a. There is no significant relationship between the volunteering of one's free time and length of institutionalization of the subject.
- 4b. There is no significant relationship between giving physical assistance to the experimenter and length of institutionalization of the subject.
- 4c. There is no significant relationship between the sharing of rewards and length of institutionalization of the subject.

Statistical Tests Applied to the Results

Chi square analyses were used to determine if the variables employed in this study were related to each other. Observed frequencies were obtained which represented the data for comparing the effects of two variables and their degree of relationship. Expected frequencies were also obtained based on the theory of chance occurrence. Some criterion for the differences between observed and expected frequencies must reflect the extent to which the distributions of the observed frequency differ for the groups samples. Such is the purpose of chi square statistic.

The statistical question that is to be asked is whether the groups differ in the relative distribution of observations among the different categories. A close correspondence between expected and observed distributions implies that no relationship exists. A wide disparity between expected and observed distributions implies that a relationship exists.

The null hypotheses were used to determine if the measures of altruism were independent of the predictor variables. The objective

was to disprove the null hypotheses, thereby stating that a relationship between the variables exists.

The statistics for this study were analyzed from the deviates of the chi square analysis.

For the criterion variables of days volunteered to help and amount of reward shared, a contingency coefficient will be the statistic used, since there are more than two groups on the criterion and predictor variables. If the chi square tests show that there is a likely relationship between the variables, then the contingency coefficient could be computed to determine the degree of relationship.

For the criterion variable of number of pencils picked up, a phi coefficient was used to investigate whether the criterion variables (sex and IQ) and pencil pick-up were related, since there were two groups on both variables. Chi square was computed from the phi coefficient, which established whether the variables were related. A significant chi square was interpreted as showing a relationship between the two variables.

CHAPTER IV

ANALYSIS OF RESULTS

Presented in this chapter are the results and statistical analysis of the hypotheses which were generated for this study. The study was designed to measure the occurrence of altruistic behavior (as defined in this study) as related to various predictor variables ascribed to the study's population of mentally retarded children. A chi square analysis and its derivatives were used to determine if these variables are related and to what degree. A $p < .01$ level of significance was arbitrarily set.

Chi square statistics were used to analyze the null hypotheses listed on pages 48 and 49 of Chapter III. With respect to the twelve correlations this study investigated, only three of them were significant at the .01 level. The three significant correlations are summarized in Tables II, III, and IV.

A marked tendency may be noted in observed frequencies of Table II, where the males responded more often to giving physical assistance to the experimenter. The females seemed almost equally split in their decisions to help versus not help the experimenter in picking up the pencils from the floor. On the basis of this data, null hypothesis 3b can be rejected.

A tendency is also noticeable in the distribution of observed frequencies of Table III. Almost three times as many subjects with low IQ's did not offer physical assistance to the experimenter as did the high IQ subjects. It was observed that the high IQ subjects were more

attentive to the demands of the task, perhaps demonstrating a greater awareness of helping in a social situation. The results in Table III indicate that null hypothesis 1b can be rejected.

TABLE II
OBSERVED FREQUENCIES OF GIVING PHYSICAL
ASSISTANCE TO THE EXPERIMENTER AS
RELATED TO SEX OF THE SUBJECT

	Pencils Picked-up	Pencils Not Picked-up
Male	45	10
Female	28	21

$\chi^2=6.407$ (df=1) Significant at .01 level
Phi correlation = .27

TABLE III
OBSERVED FREQUENCIES OF GIVING PHYSICAL
ASSISTANCE TO THE EXPERIMENTER AS
RELATED TO INTELLECTUAL
QUOTIENT

	Pencils Picked-up	Pencils Not Picked-up
35-54	33	23
55-80	40	8

$\chi^2=6.327$ (df=1) Significant at .01 level
Phi correlation = .37

A significant relationship can also be observed in the amount of rewards shared by the subjects with other institutionalized peers. These findings indicate that null hypothesis 2c can be rejected. The older the subject, the more one was willing to share acquired rewards with others. Although the general tendency was to be more selfish than altruistic, of the 39 subjects who were willing to give away the greater number of their rewards (three or more), a definite tendency was evidenced as chronological age increased. It is interesting to note, that while the older subjects gave as much of their candy away as was kept, it was the nine to eleven year old group who responded the least generous. Of the three age groups, the nine to eleven year olds were almost three times as unsharing as either other group when it came to keeping all five rewards to oneself. The most frequent number of rewards shared with one's peers was two, keeping three for oneself, indicating a slightly selfish orientation, yet, certainly recognizing the social importance of sharing with others.

It was observed from the data, that altruistic behavior (as defined by this study) does vary according to the situation and does not remain a static trait. Out of the twelve possible relationships, only three were found significant. It seems likely that the willingness to attend to others is a variable factor. Of importance to the interpretation of the data is the observation that more altruistic behavior in general was demonstrated (from the subjects) with respect to giving physical assistance and volunteering one's time, than non-altruistic behavior although this is not a statistically significant finding. It can also be noted, that when it came to sharing the candy rewards, the subjects responded the least generously to this task. In general, more rewards were kept

than were given away. These observations were not statistically tested for significance.

TABLE IV
OBSERVED FREQUENCIES AND MEANS OF SHARING REWARDS
AS RELATED TO CHRONOLOGICAL AGE

Age	Number of Rewards Shared						Mean
	0	1	2	3	4	5	
9-11	11	6	4	5	2	2	$\bar{X} = 1.56$
12-14	4	8	14	7	3	1	$\bar{X} = 2.00$
15-18	4	2	12	7	5	7	$\bar{X} = 2.76$

$\chi^2=21.705$ (df=10) Significant at .01 level
Contingency coefficient = .42

Further results of this study indicate that null hypotheses 1a and 1c cannot be rejected. Altruism, as expressed by the volunteering of one's free time does not seem to be related to the IQ of the subject. In addition, the expression of sharing one's rewards also does not indicate any significant relationship with regards to the IQ of the subject. Tables V and VI contain the data relating IQ to expressed altruism.

The results of this study also indicate that null hypotheses 2a and 2b cannot be rejected. Altruism, as expressed by giving physical assistance to the experimenter, and volunteering one's time for others, does not appear to be related to the chronological age of the subject. Over

two-thirds of the subjects gave physical assistance to the experimenter, responding with social courtesy to an unfamiliar adult. As for age and volunteering one's time for the benefit of the institution's younger residents, again over eighty percent of the subjects volunteered for three or more days to work on the coloring book project. Tables VII and VIII contain the data relating altruistic responsiveness to chronological age.

TABLE V
OBSERVED FREQUENCIES AND MEANS OF VOLUNTEERING
ONE'S TIME AS RELATED TO INTELLECTUAL
QUOTIENT

IQ	Days Volunteered						Mean
	0	1	2	3	4	5	
35-54	8	3	4	3	0	38	$\bar{X} = 3.75$
55-80	2	2	2	2	3	37	$\bar{X} = 4.33$

$\chi^2 = 7.106$ (df=5) Not Significant at .01 level

TABLE VI
OBSERVED FREQUENCIES AND MEANS OF SHARING REWARDS
AS RELATED TO THE INTELLECTUAL QUOTIENTS

IQ	Number of Rewards Shared						Mean
	0	1	2	3	4	5	
35-54	13	9	18	6	5	5	$\bar{X} = 1.92$
55-80	6	7	12	13	5	5	$\bar{X} = 2.39$

$\chi^2=6.028$ (df=5) Not Significant at .01 level

TABLE VII
OBSERVED FREQUENCIES OF GIVING PHYSICAL
ASSISTANCE TO EXPERIMENTER AS
RELATED TO CHRONOLOGICAL
AGE

Age	Pencils Picked-up	Pencils Not Picked-up
9-11	19	11
12-14	27	10
15-18	27	10

$\chi^2=.948$ (df=2) Not Significant at .01 level

TABLE VIII
OBSERVED FREQUENCIES AND MEANS OF VOLUNTEERING
ONE'S TIME AS RELATED TO CHRONOLOGICAL AGE

Age	Number of Days Volunteered						Mean
	0	1	2	3	4	5	
9-11	2	2	2	3	0	21	$\bar{X} = 4.00$
12-14	3	2	3	1	1	27	$\bar{X} = 4.05$
15-18	5	1	1	1	2	27	$\bar{X} = 4.02$

$\chi^2 = 6.598$ (df=10) Not Significant at .01 level

Tables IX and X indicate that altruistic behavior as assessed in this study does not appear to be related to the sex of the subject, with respect to volunteering of one's time and sharing of rewards. Therefore, null hypotheses 3a and 3c cannot be rejected. It seems that the attractiveness of the coloring book task may have clouded possible differences that might have been evident, employing a more familiar, routine task. As for sharing one's reward, both males and females gave away essentially the same amount, whether they were being selfish or altruistic. The data is contained in Tables IX and X.

No significant relationship was found between the variable, length of institutionalization, and any of the criterion variables. Therefore, null hypotheses 4a, 4b, and 4c cannot be rejected on the basis of the data presented in Tables XI, XII, and XIII.

From Table XI it appears that a ceiling effect was obtained on the measure, number of days volunteered, since approximately seventy percent

of the subjects were willing to help with the coloring book project on all five days. Almost no variation in the number of days volunteered was evident when the subjects volunteered anything less than the maximum five days.

TABLE IX
OBSERVED FREQUENCIES AND MEANS OF VOLUNTEERING
ONE'S TIME AS RELATED TO SEX OF SUBJECT

Sex	Days Volunteered						Mean
	0	1	2	3	4	5	
Male	5	4	3	5	1	37	$\bar{X} = 3.54$
Female	5	1	3	0	2	38	$\bar{X} = 4.18$

$\chi^2=6.823$ (df=5) Not Significant at .01 level

TABLE X
OBSERVED FREQUENCIES AND MEANS OF SHARING REWARDS
AS RELATED TO SEX OF SUBJECT

Sex	Number of Rewards Shared						Mean
	0	1	2	3	4	5	
Male	10	6	18	10	5	6	$\bar{X} = 2.21$
Female	9	10	12	9	5	4	$\bar{X} = 2.06$

$\chi^2=2.366$ (df=5) Not Significant at .01 level

TABLE XI
OBSERVED FREQUENCIES AND MEANS OF VOLUNTEERING
ONE'S TIME AS RELATED TO LENGTH OF
INSTITUTIONALIZATION

Time	Days Volunteered						Mean
	0	1	2	3	4	5	
0-2 years	3	3	3	2	2	21	$\bar{X} = 3.76$
3-5 years	3	1	1	2	0	28	$\bar{X} = 4.25$
6+ years	4	1	2	1	1	26	$\bar{X} = 4.05$

$\chi^2 = 6.257$ (df=10) Not Significant at .01 level

Table XII shows that length of institutionalization was not related to giving physical assistance to the experimenter. Dispersion of scores were not obtained by using this behavioral measure as related to the number of years institutionalized.

Table XIII also demonstrates that the sharing of candy rewards was not significantly related to length of institutionalization. It is interesting to note, from the table, that the newest residents gave away all of their rewards more often than the other two groups taken singularly. The three to five year residents not only responded the least altruistically in general, but also kept all of their candy rewards more often than the short and long term residents.

Apparently the results of the three preceding tables, indicate that altruism is not significantly related to length of institutionalization among subjects tested in this study.

TABLE XII

OBSERVED FREQUENCIES OF GIVING PHYSICAL
ASSISTANCE TO EXPERIMENTER AS RELATED
TO LENGTH OF INSTITUTIONALIZATION

Time	Pencils Picked-up	Pencils Not Picked-up
0-2 years	24	10
3-5 years	25	10
6+ years	24	11

$\chi^2 = .072$ (df=2) Not Significant at .01 level

TABLE XIII

OBSERVED FREQUENCIES AND MEANS OF SHARING REWARDS
AS RELATED TO LENGTH OF
INSTITUTIONALIZATION

Time	Number of Shared Rewards						Mean
	0	1	2	3	4	5	
0-2 years	5	6	11	6	1	5	$\bar{X} = 2.20$
3-5 years	8	6	10	8	1	2	$\bar{X} = 1.80$
6+ years	6	4	9	5	8	3	$\bar{X} = 2.40$

$\chi^2 = 13.312$ (df=10) Not Significant at .01 level

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Chapter V attempts to bring together a summary of the major findings of this study and to provide meaning to the data as related to the preceding chapters. Suggestions are also included regarding further research on the concept of altruism. It is the writer's intention that the material presented in the present chapter will help to clarify the usefulness of this study, and to demonstrate the importance of continuing one's efforts to research a trait variable which is highly related to man's social competence.

Some tentative conclusions can be inferred concerning overt, altruistic behavior as evidenced by the mentally retarded children in this study. It appears that these specific institutionalized individuals do learn some prosocial norms which reflect a willingness to respond to the needs of others. The subjects demonstrated helpful as well as generous behaviors, which occurred under conditions where material or social rewards were initially unavailable.

The significant relationship regarding the sharing of candy, provides further evidence that generosity of sharing behavior (even in mental retardation) increases with age. These findings compliment recent findings of Bryan and London (1970) and Green and Schneider (1974) regarding the positive relationship discovered between sharing behavior and children's age. In the current study the 15 to 18 year old group of subjects gave

away more of their rewards than their younger counterparts. The failure to find age differences on the other two measures of altruism, pencil pick-up and number of days volunteered, may be a result of social training. Providing physical assistance to others when help is needed, is a concrete way of demonstrating socially desirable behavior, which is easily reinforced. It is likely that these children are socialized to please adults, and not to offend them. For the latter variable, regardless of age, volunteering time to work on a novel project for the benefit of others may seem attractive, due to the change of routine activities in the daily schedule of events. Since the task was unfamiliar and novel, this may have been a factor which increased the subjects' motivation to help on the project. Irrespective of the subjects' intentions or age, almost 80 percent of the subjects volunteered to participate in the coloring book task, whether in response to a novel activity, or in hopes of gaining social praise. The subjects' social awareness to help others may also reflect the norm of responsibility (Berkowitz, 1972) depicting: it's nice to help others and it's the right thing to do. The fact that the subjects were volunteering their time to peers who were also mentally retarded and from the same institution may also be an influencing factor. As Liebhart (1972) pointed out, an individual is more likely to help a familiar or known other, than one is to lend assistance to a stranger or one with whom you do not share a common identity.

In terms of one specific population in this study of mentally retarded individuals, it appeared that the older subjects had learned to place the needs of others ahead of their own self-satisfactions. When it came to sharing candy rewards, the older subjects gave more than their

younger counterparts, although this did not hold true for volunteering their free time or giving physical assistance.

There are two possible explanation which may account for the fact that in this study the older children share more than younger children. From the social learning perspective, as mentioned in Chapter II, a young child, as compared to an older one, has had less opportunity to observe altruistic models sharing one's possessions, and be reinforced or praised for their sharing behavior. From the view of cognitive development, Piaget (1971) and Durkin (1959), allude to the theory that age-related increases in the occurrence of moralistic behavior can be attributed to a developmental progression in the child's ability to make cognitive judgments. As altruism is one form of moral behavior, it would seem to follow the same developmental pattern.

If one follows Piaget's theory of intellectual growth, the younger child is more ego-centric than the older child, who is better able to take on another's point of view, thereby being able to attend to the needs of others. Egocentrism, as expressed by Piaget, is important as it helps to tie the cognitive types of behavior representative of a particular age period to social behavior and overall personality. Since the detection of social deficiency is the starting point of the inquiry and primary point of reference in diagnosing mental retardation, it would follow that the mentally retarded child would have a more immature concept of moral judgment and sociocentric thought. Although this is likely to be a matter of degree, it is interesting to note from the results of this study that the mentally retarded are capable of attending to the needs of others. Perhaps this indicates a general ability to decenter, provided that social training has been a part of the child's general education. That a few of

the older retarded subjects in the present study demonstrated some selfish trends, is proof that age alone does not insure the ability to decenter or show altruistic responsiveness toward another individual.

With respect to sex of the subject and giving physical assistance to the experimenter, this significant relationship may reflect possible social training, as the males were more willing to give physical assistance to the experimenter than were the females. It could be this institution's emphasis on the learning of socially desirable behaviors, in which the males are taught to demonstrate polite and courteous manners which reflect the expected social roles. The girls appeared much less enthusiastic to bend down and pick up objects off the floor (not accepting responsibility for giving physical assistance), preferring to let the pencils remain on the floor, until the experimenter returned to the room and proceeded to pick them up. This finding regarding sex and offering physical assistance to the experimenter, appears to typify the expected behavior of one's sexual-social roles.

With respect to sex and number of days volunteered to work on the coloring book project, there were no significant tendencies for sex to be a factor in the giving of one's time. Both males and females were willing to work on the project, which may have been due to either the novel stimulation that was required from the task, or the norm of social responsibility. As with the sharing of rewards, differences again were not found indicating any tendency that girls are more generous than boys or visa versa. This finding seems to be consistent with the majority of studies where sex differences were investigated. It seems apparent from the literature that there are no consistent results, regardless of experimental

tasks, that allude to significant sex differences in the altruistic responses of children (Krebs, 1970).

The only relationship that was found to be significant regarding IQ was the subject's IQ and his willingness to provide physical assistance to the experimenter. This may represent the higher intelligent subject's awareness to take responsibility for helping another, as a way of receiving external recognition and praise. Another factor that might be involved in this relationship, is the emphasis placed upon preparation for involving oneself in the society at large. If one is to make friends with non-retarded individuals or make a good impression with one's employer, one should do good things for others when the opportunity presents itself. Because of their contacts with the greater society, more social awareness training may be directed toward the higher level residents who are often employed off-campus.

The fact that IQ was not found to be significantly related to the volunteering of one's free time, may again be the result of wanting to engage in a novel activity that seemed to have a high attractiveness component to it. That IQ was not found to be related to sharing rewards, may in part be a result of the wanted value given to the candy rewards, or the institution's social training, emphasizing the norm of social responsibility.

Length of institutionalization did not produce any significant relationships with the measures of altruism. Apparently, as the data shows, altruism is not related to length of institutionalization for the subjects of this study.

One factor which may explain the lack of significant results with this variable is the possibility that the social skills related to these

altruistic behaviors may have already been acquired by the time the subjects have reached the chronological age required of this study. As only three subjects were not acquainted with the concept of sharing, perhaps the internalization of the importance of sharing has already become a familiar social skill by the time these subjects are nine years old. It is also possible that these behavioral measures of altruism used in this study did not tap a higher level of altruistic conceptualization, which may result from extended social interaction within a communal living setting. It would appear that the variable length of institutionalization could only yield significant results if the altruistic measures related to some aspect of extended institutionalization. Perhaps the sharing of personal possessions which have been in the subject's ownership over time may only be shared once the subjects find security with their peers. A measure such as the sharing of a high-preference, previously owned possessions such as money, clothes or a radio, may elicit more variation in expressed altruism with respect to length of institutionalization.

As mentioned previously, the nature of the present study is not to investigate the motivating factors which bring about the elicitation of altruistic behavior, but simply to observe and report such behavior in a mentally retarded population. A few general findings, however, can be noted from the study. While not statistically tested, the majority of subjects were willing to volunteer their lunch time to work on a coloring book project for the benefit of chronologically younger children, who were residents of the institution. Only ten subjects out of the 104 total did not want to volunteer any of their time for the benefit of these younger children. For the variable of giving physical assistance to the

experimenter, again, the majority of subjects attended to the task. Of the 104 total subjects, only 30 did not respond to the pencil pick-up task. The variable of sharing one's candy reward appeared to elicit the most variation concerning the decision to keep one's rewards versus giving them away. Of the 104 subjects, nineteen responded totally selfish keeping all rewards, while only ten responded totally generous giving all their candy away to an unknown peer. It is optimistic to note that all but two of the subjects of this study demonstrated some socially desirable responses with respect to specific altruistic behaviors observed. What is important about these observations is that they are far from zero. Many of the subjects in this study do help their peers even when there are no obvious material benefits to be gained from their responsiveness.

What does seem evident from these observations is that the world cannot be divided into altruistic and non-altruistic people. Altruism may be relative where "other" oriented behaviors depend on several variables or conditions. People can be altruistic some of the time without being so inclined all the time. The incentive to act altruistically may be determined by group pressure, situational demands, or adherence to the norm of social responsibility. This view is quite similar to the conclusions of the classic Hartshorne and May (1928) study of honesty and conduct, where the researchers concluded that: 1) people are not either all honest or dishonest, and 2) if a person is dishonest in one setting, it does not mean he will or will not be dishonest in another. In as much as altruism is a type of moral behavior, it would appear likely that altruism and conduct are highly related. Moral behavior, whether it is honesty or altruism, is a value concept that must be understood in the same way as any other behavior in terms of the individual's needs,

group pressures, or one's own ethical conscience. Further research on the topic of altruistic behavior may help clarify the role of each of the foregoing factors.

Although significant conclusions were found from the data, altruism appears to vary according to the situation, and is not a consistent character trait. The situations which elicit altruism are numerous, and although it is this researcher's opinion that it is a definable and measurable trait, it is likely to be a rather elusive and difficult entity to make precise statements about. It is evident that more research is needed in order to gain a better understanding of the factors that elicit altruistic behavior, as well as the subject variables that are related to it.

A Post-Hoc Analysis of Altruistic Measures Used in This Study

Altruism was assessed in this study by employing behavioral measures. Although other methods of assessing altruism are available to the researcher such as paper and pencil tests, the present writer advocates the use of behavioral measures. As mentioned in Chapter I, paper and pencil tests of altruism have inherent problems because they have no adequate check for validity. Inasmuch as assessing altruistic behavior by empirical observation does not concern itself with motivational factors, it is the behavior itself that is of primary importance, not the reasons behind the decision to act. It appears then, that the meaning of altruism can best be understood by operationally defining the behavior to be observed, and then observing it for frequency of occurrence.

As behaviorally observed in this study, altruism was defined as a type of "giving" behavior which in essence refers to all behaviors in which a person gives something of himself to another. On the other hand, altruism might best be considered as a category of giving, referring to helpful behaviors which involve some degree of cost to the helper and in which the prosocial behavior is an end in itself. The literature also suggests that altruism can be further classified into different types of giving responses. An individual can give physical assistance to another (involving energy and time investments), material possessions (sharing or donating possessions), or the sharing of discomfort (being empathetic to another's distress). These variations of giving can be further subdivided as to amount of cost or self-sacrifice to the individual and factors involving the effects of time. For any of the giving responses, the act itself can be measured by a cost analysis to the individual. The individual can respond altruistically with either high degree of cost or self-sacrificial behavior or where there is relatively minimal cost to the individual. As discussed in Chapter I, cost can involve: 1) financial commitments, 2) possibility of threat or danger, 3) type of request, and 4) time pressures. With regard to the effects of time, the giver can respond to the immediate situation or one can respond to a situation which calls for a delayed/extended time response. For the measures of altruism as implemented in this study, two of the three general types of giving responses were employed (giving physical assistance and sharing material possessions). As to cost and time factors, altruistic behavior as assessed in this study can also be analyzed as being of relatively low cost to the individual and involving only an immediate altruistic response. Although this study employed only three measures of altruism, there

appears to be variety of ways in which altruism can be classified and measured. Further progress in clarifying the ways in which altruism can be behaviorally observed will lead to improved efforts for researching altruism.

As to the specific measures of altruism as defined in this study, the most valid measure appeared to be the sharing of rewards. This task demonstrated the greatest amount of discrimination or dispersion of scores, giving more credence to the validity of the measure. The second most valid measure of altruism as observed in this study was giving physical assistance to the experimenter. Although the distribution of scores were not as varied as the previous measure, dispersion of responses were moderately observed. The task which produced the least credibility as a measure of altruism was the volunteering of one's time through verbal intent. The subject responses were so overwhelmingly skewed to the negative that a ceiling effect was noticed. This effect could possibly be altered by allowing for actual behavior performance beyond just verbal intent. An extraneous factor that might have effected the subjects response to this task was the demand characteristics or meeting the expectations of the experimenter. Also, as mentioned earlier in this chapter, the idea that the coloring book had a high attractiveness component to it (eagerness to involve oneself in a novel situation) may also account for much of the willingness to help. Although other behavioral measures of altruism would certainly be appropriate to measure the same type of giving responses as in the present study, it is the writer's intent to provide fellow researchers with a brief analysis of the validity of the altruistic measures used in this study.

Another consideration which evolved from the interpretation of the results of this study is the issue of material possessions. It seems that future research on altruism and the giving of material possessions should attend to the issue of object preference. Differences in the value given to the possession can be classified into two basic categories: low object preference and high object preference. Regardless of age, it has been noted (Green and Schneider, 1974) that an individual is less likely to give up a highly preferred object than a least preferred object. The greater the perceived value of the possession the less likely one is to give it away. Sharing a possession of low object preference would seem to involve less sacrifice to the individual than an object of high preference. As used in this study, candy rewards would appear to be of low object preference since candy is often available to this population. However, if more age appropriate objects had been used representing a higher incentive value, actual sharing behavior may have elicited a somewhat different distribution. The incentive value of the possessions with regard to sharing behavior requires further investigation. Therefore, future studies on altruism should address themselves to the issue of object preference.

It is hoped that the preceding discussion regarding categorizing and measuring of altruistic behavior may help future researchers regardless of their persuasion. Although the empirical study of altruism is plagued with many problems in establishing adequate measures and operational definitions, future researchers should not be discouraged. It is important that the applied behavioral researcher continue to study this variable since it is so highly related to the quality of human relationships in society.

Suggestions for Future Research

With regard to future research on altruism, one of the recommendations for acquiring a greater understanding of the mentally retarded individual's concept of altruism would be to follow the Piagetian approach. Employing the clinical interview as a method of investigation would allow for a systematic analysis of the child's line of thinking. Understanding "why" a child responds altruistically or extracting "what" altruism means to the mentally retarded may provide useful information as to the cognitive and moral developments of the child's sense of altruistic responsibility.

It would also appear beneficial for future studies to investigate the relationship between verbal indications of expressed altruism and actual generous or helpful behaviors. Acts of generosity ultimately have more impact than verbal intentions on perceived social interactions.

Only one of the three tasks in the present study required subjects to express verbal intent to provide help to another. For the volunteering of one's free time, observation of actual behavioral performance was not assessed in this phase of the experimental task. The remaining two tasks (giving physical assistance to the experimenter and sharing of candy rewards) involved immediate altruistic behavioral performance. On these two measures of altruism as assessed in this study, the giving of oneself to another required an expenditure from the "donor" with regard to actual time invested. However, the output of donor energy was minimal allowing the donor to give little more than a few seconds of his time with respect to sharing rewards and giving physical assistance.

Volunteering one's time to work on the coloring book project involved no actual behavioral performance as it measured only verbal intent.

To further assess the degree of actual giving of one's self, one could employ a task which requires a greater expenditure of time or energy from the donor. This would tap a deeper level of the donor's intention to meet another person's needs by giving more than a fleeting moment of one's time. This could be assessed by actually following through with phase one of the verbal intent. At this point not only does the behavior itself become observed, but the element of time becomes a factor. Behavioral performance can now be observed over the effects of time, short-term versus extended responding.

Aside from the need for help which arises during short-term immediate situations, opportunities for acting altruistically may occasionally occur when the response can be given over an extended period of time. From the foregoing, behavioral measures of altruism can be observed by employing a task in which the subject can render an immediate response or a delayed/extended response. Examples may help to clarify these two time variables. An immediate response of altruism would be crucial to the victim of an assault who may end up in considerable discomfort if the donor does not act as quickly as possible. As to a delayed/extended response of altruism, donating ten pints of blood over a period of several months with no expected social or material gain is another way of responding to social needs. Although no judgment is being made at this time as to the quality of the time-responses, it becomes clear that the decision to respond altruistically is important regardless of the intervening time factors. The point the writer is suggesting is that measuring the mental retarded individual's willingness to respond altruistically

immediately versus over time gives additional information as to the possible internalization of this important social concept.

As the present study was primarily descriptive in its research goals, an alternative way to study the concept of altruism would be to look at the effects of treatment conditions. As the literature suggests, most of the experimental studies investigating altruistic behavior utilize a social learning orientation. This theoretical approach would appear to be a particularly valuable method for helping the mentally retarded to learn appropriate social skills. From diagnostic assessment the mentally retarded have certain cognitive deficiencies in their abilities to acquire knowledge through the "written and spoken" word. Therefore, social modeling may be the most preferred method of presenting the concept to the retarded. Following the rationale of Bandura and Walters (1963) on social modeling and imitation, observational learning may be an effective approach for developing an altruistic behavioral repertoire in mentally retarded children.

A valuable future study for assessing altruistic behavior would be to investigate different treatment conditions. Such a research design might contrast the effects of social modeling to "moral" preaching without observational opportunities utilizing control group comparisons. The goal of this proposed investigation would be to compare the efficacy of how altruism is most effectively learned. The research question would not be limited to just short-term learning per se, but also to the effects of learning over time. If an awareness of altruism can be learned by the mentally retarded but fails to become internalized as a concept over the effects of time, then altruistic behavioral expenditure becomes shortlived and situationally determined. It is the writer's opinion that

learning the concept of altruism is superior over a more stimulus-specific type condition. A conceptual understanding of altruism requires a set or frame of mind that differs somehow from a situation-specific understanding of altruism. What is of primary importance to the individual is to achieve transfer of learning or generalizability of response. An internalization of the concept of helping when others are in need may be related to an increased probability of altruistic responding over longer periods of time. Gaining information as to the most preferred method of developing altruism that involves transfer of learning would seem to contribute a great deal of information as it relates to the mentally retarded individual's social functioning.

Since it was suggested from the results that age of donor was one of the variables in which significance was found regarding the sharing of candy rewards, further research could be conducted to acquire more information about this variable as it relates to the donor's willingness to respond altruistically. A further refinement of this indication would investigate the differences in the donors willingness to respond altruistically to different age-recipient confederates. The important research question would seem to be: does the amount of possessions donated depend on the donor's age, the recipient's age, or an interaction between the ages? The experimenter could again categorize the subjects by age groupings and let each subject divide up an uneven number of rewards to a confederate who is younger, same age, slightly older, or of adult status. Results may provide information regarding several variables such as: 1) identification with peers, 2) reactance to the dependency of the younger child, 3) desire to be included or accepted by older peers, and 4) identification with adult status. The data from this study would show

relevant information regarding how the mentally retarded child of differing ages identifies with significant others in their immediate environment. Results could provide evidence as to the need system of social interaction.

In summary, altruism as assessed in this study suggests that such behavior exists in a mentally retarded population. As observed from the results, however, altruism is not a constant personality trait and is not consistently demonstrated in all situations where help could be offered. Therefore, one cannot always depend on its regular occurrence. The needs of the recipient apparently have to be convincing enough to give the donor sufficient information that help is really needed. At this point it becomes a decision-making process as to whether the needs of the "other" warrant an altruistic response from the donor. Although the individual may have internalized a norm of giving or helping that increases the likelihood of responding altruistically to certain situations, there are certainly many circumstantial variables which effect the donor's perceptions and decisions to give of oneself.

The rationale for continued research on altruistic behavior as demonstrated by the mentally retarded is important to their overall social competence and acceptance. Expressed altruism, whether in the form of sharing, donating or helping, is an indication of one's social interaction with significant others.

As expressed by Newman and Doby (1973):

Social competence is a problem for the mentally retarded because it is the mentally retarded's inability to respond appropriately to environmental cues, which in general makes him maladaptive . . . If social competence is viewed as a behavioral response to the environment, then any factors that contribute to the adjustment of the individual to this environment needs to be considered as possible variables (p. 723).

Social competence may be particularly relevant in non-institutionalized job settings. Job employment often depends on social skills as much or more as occupational skills and if the mentally retarded individual has learned how to be cooperative, altruistic, and dependable, he will most likely function with little difficulty. The social characteristics of empathy, cooperation, and altruism are often lacking in the mentally retarded simply because they have not received the necessary training by which these are acquired. It would appear then, that social competence is essential to good relations with peers and significant others.

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APPENDIX

LISTING OF THE RAW DATA

	Sex	Age	IQ	Length of Institution- alization	Days Volun- teered	Pencil Pickup	Amount Donated
1	M	10	42	11 years	0	10	0
2	M	14	64	7 years	5	10	3
3	M	16	57	1 year	5	10	2
4	M	17	55	2 years	5	10	5
5	M	13	61	4 years	5	10	1
6	M	17	40	10 years	5	10	5
7	M	10	45	1 year	3	10	0
8	M	9	56	2 years	5	10	0
9	M	9	60	3 years	5	10	0
10	M	9	40	3 years	0	0	0
11	M	9	49	2 years	1	10	2
12	M	16	57	8 years	5	10	2
13	M	17	48	10 years	5	10	2
14	M	17	52	2 years	0	0	2
15	M	15	42	3 years	3	10	1
16	M	16	43	11 years	5	10	2
17	M	15	58	8 years	4	10	4
18	M	14	42	6 years	2	0	1
19	M	11	51	9 years	5	10	4
20	M	14	48	6 years	5	10	2
21	M	17	51	11 years	5	10	5
22	M	15	57	2 years	5	10	5
23	M	15	48	3 years	5	10	3
24	M	10	50	3 years	5	0	3

	Sex	Age	IQ	Length Institution- alization	Days Volun- teered	Pencil Pickup	Amount Donated
25	M	14	50	4 years	5	10	2
26	M	17	43	7 years	0	0	3
27	M	16	61	6 years	5	10	3
28	M	14	55	1 year	5	10	3
29	M	17	60	2 years	5	10	4
30	M	14	61	6 years	5	10	2
31	M	18	41	10 years	1	0	2
32	M	17	51	7 years	5	10	4
33	M	14	70	3 years	5	10	5
34	M	15	53	3 years	5	10	3
35	M	12	53	4 years	5	10	0
36	M	13	62	2 years	5	10	3
37	M	13	55	5 years	5	10	3
38	M	11	53	5 years	5	10	0
39	M	13	58	2 years	5	10	2
40	M	13	46	4 years	1	10	2
41	M	13	39	2 years	2	10	2
42	M	10	69	1 year	5	10	3
43	M	11	64	1 year	5	0	5
44	M	9	58	3 years	3	10	0
45	M	12	46	6 years	3	0	2
46	M	12	77	4 years	5	10	2
47	M	13	42	2 years	0	10	2
48	M	13	48	1 year	5	10	2

	Sex	Age	IQ	Length of Institution- alization	Days Volun- teered	Pencil Pickup	Amount Donated
49	M	13	65	2 years	1	10	1
50	M	11	49	4 years	5	10	2
51	M	9	51	1 year	2	0	0
52	M	11	57	4 years	5	10	1
53	M	11	53	3 years	5	0	0
54	M	17	79	8 years	5	10	4
55	M	10	75	1 year	3	10	1
56	F	15	60	7 years	5	10	3
57	F	10	55	2 years	1	10	1
58	F	11	36	1 year	5	0	0
59	F	12	42	5 years	5	10	0
60	F	9	40	3 years	5	10	2
61	F	12	60	5 years	0	10	3
62	F	10	52	4 years	5	0	1
63	F	14	71	2 years	5	10	2
64	F	14	53	3 years	5	0	1
65	F	11	51	1 year	5	10	1
66	F	17	44	6 years	0	0	1
67	F	17	38	10 years	5	10	0
68	F	17	40	10 years	5	10	0
69	F	14	49	7 years	5	0	2
70	F	16	51	11 years	5	10	0
71	F	16	46	6 years	5	10	2
72	F	16	42	6 years	5	0	0

	Sex	Age	IQ	Length of Institution- alization	Days Volun- teered	Pencil Pickup	Amount Donated
73	F	16	41	7 years	0	0	5
74	F	10	44	1 year	5	10	3
75	F	13	55	6 years	5	0	1
76	F	13	53	5 years	5	0	4
77	F	11	54	1 year	5	0	1
78	F	15	62	3 years	5	0	2
79	F	16	55	3 years	5	10	3
80	F	16	56	2 years	4	10	5
81	F	15	46	6 years	2	0	4
82	F	10	61	2 years	5	0	2
83	F	15	51	3 years	5	10	5
84	F	10	41	6 years	5	10	4
85	F	12	48	3 years	0	0	0
86	F	13	40	7 years	5	0	1
87	F	11	49	2 years	2	0	5
88	F	12	46	5 years	5	0	3
89	F	15	55	3 years	5	10	2
90	F	14	59	6 years	5	10	3
91	F	12	60	1 years	5	10	0
92	F	15	55	3 years	5	0	2
93	F	14	56	2 years	5	0	1
94	F	13	59	3 years	2	10	2
95	F	17	46	3 years	5	10	2
96	F	11	61	2 years	5	0	0

	Sex	Age	IQ	Length of Institution- alization	Days Volun- teered	Pencil Pickup	Amount Donated
97	F	9	61	2 years	5	10	3
98	F	14	42	3 years	5	10	1
99	F	15	70	5 years	5	10	3
100	F	14	69	7 years	5	10	4
101	F	12	73	6 years	5	10	4
102	F	17	76	2 years	0	0	2
103	F	9	64	2 years	6	10	3
104	F	12	60	6 years	5	10	0

VITA ^γ

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