The majority of self-concept and sociometric research on crippled children has been comparative studies in which the disabled child has been a minority member within a group of physically normal children. This study takes a different avenue in that it investigated the self-concept and peer reputation of physically handicapped children when they are integrated with similarly handicapped peers.

Self-concept was defined as an individual's perceptions, beliefs, and feelings about himself, resulting from social and environmental experiences. It is generally believed that body-image is an important component of self-concept and that a crippling condition may cause peer group rejection. The hypotheses for this study were formulated in terms of these theoretical implications. The peer reputation scores are regarded as a criterion measure of adjustment.

To add further dimension, an attempt was also made in this
study to investigate the effect of a physical disability on specific areas of restriction such as inability to speak or walk.

Subjects for the study were 28 moderately to severely handicapped children ranging in age from 10 to 16 and who were enrolled in special classes for the physically handicapped. Their disabilities were neuro-motor in nature.

Data were gathered by the use of three rating scales which could be used without special adaptation by these subjects, who had extreme difficulty in writing and speaking. The self-concept scale was that devised by Lipsett (1958), the Peer Nomination Inventory Scale was that constructed by Wiggins and Winder (1961) and the Physical Rating Scale was formulated by the author to measure the degree of disability. Physical ratings were made by the teachers and physical therapists.

The general hypotheses tested were:

1. There will be a negative relationship between the self-concept score and the severity of the physical handicap.
2. There will be a negative relationship between the self-concept and age in the physically handicapped child.
3. There will be a positive relationship between the self-concept score and the likeability score on peer rating.
4. There will be a positive relationship between severity of physical handicap and total negative peer rating score.
5. There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by total selection score.
The major findings were:

1. Pearson product moment correlations did not reach the 5% level of significance although definite trends in the direction hypothesized were noted for hypothesis 2 and 3. Surprisingly, hypothesis 4 showed a negative rather than the anticipated positive correlation.

2. The mean self-concept score of the physically handicapped children in this study did not differ appreciably from that of the physically normal children used in Lipsett's (1958) study. She obtained a mean self-concept score of 86.75, while these subjects had a mean self-concept score of 86.18. The physically handicapped subjects in this study had a slightly larger S.D. (Lipsett's S.D. 8.18; S.D. in this study 12.5375), indicating more variability in their self-concept score.

3. A comparison of the cluster of variables reported in the Wiggins and Winder study (1961) and those found in this study indicated a similar pattern except for the aggression and withdrawal cluster. In the Wiggins and Winder study the correlation was .294 for aggression and withdrawal, which attests to the relative independence of these clusters; but in this study the correlation was .4605, which suggests that these behavior traits were not as independent as they were for the physically normal subjects used in the Wiggins and Winder study. In both studies, the predominant clusters were for aggression and depression and for withdrawal and depression.
The failure to support these hypotheses is in agreement with the belief that physically disabled subjects are not necessarily rejected by their peers, nor are they universally maladjusted, although there have been studies which indicated this. The results of this study do raise the question of the role of early therapy and counselling and use of special classes for physically handicapped children. Whatever the reason, these subjects did not have lower self-concepts, and were not rejected by their peers, despite severe neuro-motor impairments.

Based on this study, suggestions were made for counselors' and teachers' use of self-concept tests and peer reputation, as well as suggestions for further research to locate possible relevant variables and combinations of variables to aid in the early rehabilitation of the physically handicapped child.
THE RELATIONSHIP BETWEEN THE PHYSICALLY HANDICAPPED CHILD'S SELF-CONCEPT AND HIS PEER REPUTATION

by

Hazel Brown Breslin

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THE RELATIONSHIP BETWEEN THE PHYSICALLY HANDICAPPED CHILD'S SELF-CONCEPT AND HIS PEER REPUTATION

CHAPTER I

INTRODUCTION

Large numbers of professional people all over the world are devoting their lives to rehabilitation. They make great efforts to assist the disabled person or child to take his place in normal society and normal living. Sometimes their efforts result in great success. More often success is limited by variables that are not yet understood.

All who are involved in the education of handicapped children - parents, teachers, counselors, social workers, and occupational therapists - must of course be concerned with the children's physical well-being as well as academic and vocational preparation. In addition, their goals must include good general psychological adjustment for the disabled. Thus effective work with crippled children depends upon understanding both the physical difficulties and the emotional and social problems.

The modern educator, whether working with physically normal children or exceptional children, makes increasing use of experimental and quantitative evaluation of personality in his endeavors to maximize educational experiences. In this area an attempt has been made to identify those factors which influence the development of self-awareness and social interactions. The relationship of these two personality dimensions to the physical disability is the focus of this study.
The general problem, then, appears to be the need for better understanding of the effect of a physical handicap on the psychological process in disabled children. It is not easy to disentangle the threads of cause-reaction-effect, for there is no agreement in the literature that physically handicapped children are inevitably mal-adjusted, but when a child is, it is generally agreed that physique was only one factor in an extensive context of environmental and personal conditions acting together (Barker et al., 1953).

Many personality theorists believe that the self-concept is the core around which all behavior evolves and that the self-concept follows a developmental sequence beginning very early in life, and that parents, peers, and teachers play a very important part in the picture a child develops of himself.

The specific problem is that, despite great strides in medicine, there is presently little hope that illness and disability will disappear. Instead, because of the present medical knowledge, many of the physically handicapped children who in the past would not have survived, now, because of medical knowledge, are able to live a nearly normal life span. This, in addition to normal population expansion, indicates that the number of physically disabled persons is increasing.

Although there is considerable literature on the behavior and personality development of the physically handicapped, the amount of systematic research is very limited. The chief methodological problems
cited by research in somatopsychological investigations are: selecting 
representative samples and securing adequate controls; lack of instru-
ments for measuring physical disability; and the lack of appropriate 
tests for assessing behavior and personality difficulties. Many of 
the studies have been either descriptive in nature or comparative 
studies in which the emotional and/or social adjustment of handicapped 
children are compared with those of physically normal subjects.

A survey of the adjustment of physically handicapped adolescents 
(Norris and Cruickshank, 1954), suggests that while these children 
share all the problems common to this developmental period, disability 
adds a further dimension. Among the more reliable findings is the 
fact that there are negligible differences on paper and pencil tests 
between handicapped and non-handicapped youth, but that the former are 
less mature, particularly in their reaction to meeting new situations.

Noel (1955) lists the following as being the most common frustrations 
discovered among the handicapped: the psychological repercussions of 
physical limitations on the self-image - resulting in physical and 
social insecurity, loss of prestige in the eyes of others, and re-
jection by society.

Whether or not the child is accepted by his peer group is also 
recognized as an important factor in the developing self-concept. The 
crippled child is limited not only in physical ability: he may also be 
limited in the kinds of play experiences open to him. Other children 
may treat him differently than they would if he were not crippled and 
he himself may learn to believe that not only is he different, but
also a less worthy person than others. Although few sociometric studies have been conducted on the physically handicapped child, the results indicate that this child is significantly underchosen by his physically normal classmates (Force, 1956). To the author's knowledge, no studies have been conducted on the peer reputation or the self-concept of the physically handicapped child within a classroom situation where the other children were similarly disabled.

Statement of the Problem

The specific problem of this study will be to investigate the relationship between the self-concept and the peer reputation of the physically handicapped child. The five hypotheses which will be tested are based on the theoretical implications of a physical handicap on the developing self-concept. The peer reputation in this study is to be regarded as a criterion measure of adjustment, for the social stimulus value of the child to his peers as a source of observational data has not been fully exploited as a criterion measure of adjustment. An attempt is also made in this study to investigate the effect of a physical disability on specific areas of restriction such as ability to speak or to walk. Specifically, the hypotheses to be tested are:

1. There will be a negative relationship between the self-concept score and the severity of the physical handicap.

2. There will be a negative relationship between the self-concept score and age in the physically handicapped child.
3. There will be a positive relationship between the self-concept score and likeability score on peer rating.

4. There will be a positive relationship between severity of physical handicap and total negative peer rating scores.

5. There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by the total selection scores.

Significance of the Study

Virtually everything in the literature concerning the psychology of the self relates to people with basically normal physical development. Knowledge in this area for the physically handicapped is quite meager, despite the importance given to self as the core of man's psychological being. If we wish to understand a child or a person, we need to know how he views himself and his environment.

This makes self-understanding and self-acceptance one of the most important tasks of psychology and education. Fortunately, there is now some evidence that tends to show that the school can adapt its educational procedures so as to help children acquire healthy and realistic attitudes about themselves. If this goal is achieved it would prevent the tragedy of the child coming to adulthood burdened with anxiety, hostility, defensive feelings about the self, and feelings of guilt, inferiority or other feelings of self-disparagement and self-distrust (Jarsild, 1952).
The importance of peer acceptance to children and adolescents and the pressure of the peer group on individual pupils are frequently overlooked by teachers. These factors can be disruptive and disturbing instances in the classroom or they can contribute to more effective learning experiences. The effect they have on the learning of individual pupils is determined largely by the extent to which teachers attempt to understand and improve the pupil's social relations (Gronlund, 1959, p. 235).

Research on body-image has attempted to relate subject's feelings about the physical characteristics with other variables. Bledsoe and Garrison (1962) noted that self-reports of boys stress physical characteristics and athletic skills to a greater extent than those of girls. Copple (1961), who studied various aspects of the self-concepts of 102 fifth-grade boys, suggested that the self-concept was based on others' judgments about one's skills, especially motor skills. Self-evaluative statements about physical attributes were mentioned more by Jersild's (1952) subjects in grades eight through ten than by those of other ages. Other research data also suggests a relationship exists between self-concept and physical characteristics, although it is evident that the latter are confounded with other influential factors including attitudes of other persons. These attitudes may be affected by a person's physical characteristics, and, in turn, perception of them may affect his concept of himself.

Although there are as many definitions of self-concept as there are self-theorists, these definitions all revolve around the general
theme that this term represents the complete picture a person has of himself. In addition, there is some confusion as to the relation of the ego, super ego, and personality to self-concept. To prevent confusion the connotation of self-concept as used by this author will be presented, along with other frequently used terminologies, in the following section.

**Definitions**

**Self-Concept**

The definition of self-concept used by this author will be based on that given by English and English as well as the amplification provided by Jersild. It is realized that there are unconscious elements in self-concepts, but this is beyond the scope of this study.

According to English and English (1958) self-concept is defined as:

"A person's view of himself; the fullest description of himself of which a person is capable at any given time. Emphasis is upon the person and object of his own self-knowledge, but his feeling about what he conceives himself to be is usually included" (p. 486).

Jersild (1960) describes the self as being:

"Made up of all that goes into the person's experiences of individual existence; it is a person's 'inner world'; it is a composite of a person's thoughts and feelings, strivings and hopes, fears and fantasies; his view of what he is, what he has been, what he might become and his attitudes pertaining to his worth.

"The self includes, among other things, a perceptual component, the way a person conceives himself - the image he has of the appearance of his body, the
picture he has of the impression he makes on others. It also includes a conceptual component: his conception of his distinctive characteristics, his abilities, resources, assets, likes and limitations, his conception of his background and origins and of his future. There is also an attitudinal component of the self, including the feelings a person has about himself, his attitudes concerning his present status and future prospects, his tendency to view himself with pride or shame, his convictions concerning his worthiness or unworthiness and his attitudes (which may be mixed) of self-esteem and self-reproach" (p. 116).

Body-Image

A term used by Cardwell (1956) to express the picture each person has of himself and of his own body. The body-image forms part of every person's psychobiologic constitution. When a disease occurs, particularly one that is physically disabling, the body-image has to take on a new alignment.

Somatopsychology

The term "somatopsychology" originated from two Greek words, "soma", or body; and "psyche", mind or soul. Somatopsychology then, is the science that studies the relationships that bind physique and behavior (Cruikshank, 1963, p. 2).

All of us in everyday life tend to make judgments of people in terms of their physiques, and also to evaluate physiques in terms of behavior. It is the function of somatopsychology as a science to try to make sense out of the confusing array of data. One of the oldest ideas in the history of psychology is based on the observation that physique determines behavior.
Sociometric Technique

Sociometry is a technique for evaluating the extent to which pupils are accepted by their peers and for determining the internal social structure of the group. This technique involves the use of tests which are called "sociometric" tests, a term coined by its originator, Jacob L. Moreno (1934). The term "sociometry" was derived from Latin, and means social or companion measurement. Regardless of variations in the sociometric test, it is basically a method of evaluating the feelings of the group members toward each other with respect to the common criteria.

Peer Reputation

This is a refinement of the general sociometric technique in that specific personality traits are rated instead of merely nominating peers on the basis of social popularity. According to Gronlund (1959) social popularity as a single adjustment criterion seems to be severely limited by the vicissitudes of the significant others involved.

Physically Handicapped

The term "physically handicapped" in this study refers to those children who are so severely handicapped by neuro-muscular conditions as to require their enrollment in special classes for the physically handicapped.
Significant People

By "significant people" is meant those persons who are important and who have significance to the child by reason of his sensing their ability to allay insecurity or to intensify - to increase or decrease - his sense of helplessness and to promote or diminish his sense of well-being (Hamachek, 1965, p. 6).

In summary, a child's inner world mirrors his identity, toward which he strives irrespective of the cost. His self-concept is a prime determiner of behavior and forms the core of his personality. Experts in child development, psychology, sociology, and related fields are finding increasing evidence to support the fact that how a child feels about himself - his self-image - has a profound effect on how he functions.

The roots of the self-concept reach deep into early childhood. An awareness of self and a sense of identity are formed during this period. The child's energies are directed toward finding out who he is and gaining an understanding of reality. The child's idea of self is essentially a reflection of the responses that others make to him. Depending on his experiences, he conceives of himself as good or bad. Research indicates that teachers' attitudes toward children are more important than their techniques and materials. An emotionally healthy atmosphere in school fosters a feeling of well-being, which encourages achievement. There is growing recognition that the affective tone of the classroom can stimulate or hinder the learning process (Crovetto,
With these factors in mind, this study investigates the effects of a crippling condition on the self-concept and the peer reputation. The subjects are moderately to severely handicapped children ranging in age from 10 to 16 with a mean age of 12, and who are enrolled in special classes for the physically handicapped. The data will be collected by means of responses to paper and pencil questionnaires using three rating forms. A second aspect of this study will be concerned with the restriction on specific areas of development, such as ability to speak or walk. To the author's knowledge, similar studies on the physically handicapped child in special class settings have not been reported, nor have there been studies on these areas of impairment.
CHAPTER II

REVIEW OF RELATED LITERATURE

Although the sub-divisions in this chapter are somewhat arbitrary and overlapping, the two central themes "self-concept" and "sociometry" are discussed. The presentation of the relevant literature will be developed under broad divisions. These divisions will include theories related to the development of the self-concept; research relating to self-concept and sociometry; instruments used in these areas of study; and research problems involved in studying the physically handicapped. In addition, a brief review of the major personality theories which relate to the self have been included, along with a brief discussion on the confusion of terminology regarding the self-concept.

This study is being conducted on physically handicapped children and a special attempt has been made to locate literature and research studies which include personality differences between handicapped and nonhandicapped children. Specifically, this project is concerned with the effect of the physical handicap on the child's developing self-concept, and the impact of a physical handicap on the child's acceptance or rejection by his peer group. Factors which are believed to be important in influencing the developing self-concept, such as social relations, physical ability, body image, and others, have been included.

Studies relating to social choices and peer reputation among
children have concentrated on such factors as socio-economic position, ordinal position, academic ability, physical attributes, and personality factors. Few have been directly concerned with the relationship between self-concept and peer reputation.

**Self-Concept Theories**

One of the more difficult tasks for psychology is relating the observation of behavior to the study of mental processes. One approach to the problem has been to limit psychology to the study of behavior and to leave to philosophy the task of speculating as to the existence and nature of mind and soul (Lowe, 1961).

There have, however, been psychologists who have sought to make sense out of human action by positing a self or ego in order that they might understand the coherence and unity which they have thought that they have seen in human behavior. Thus G.W. Allport (1943) claimed that the concept of ego was made necessary by certain shortcomings in association and he listed eight different uses for the concept of the ego.

Theories about a self-concept can be divided, for convenience, into three mainstreams whose contemporaneous development evidences little interaction. Although the term "self" can be traced to earlier philosophers, for example, St Augustine and Descartes, it was not until early in the twentieth century that such sociological theorists as George Herbert Mead and Charles Cooley stressed self-concept as being essential in social interaction. A second stream of self theory has generally been attributed to such twentieth century psychological
theorists as Carl Rogers and Abraham Maslow. Their stress on the conscious or phenomenal self as evidenced during psychotherapy was first expressed by Victor Raimy (1943).

A third stream of thought, emphasizing perceptual processes, is represented by Jerome Bruner (1965) and Arthur Combs (1962). The latter group of theorists have stressed the effects of behavior on individuals' perceptions of their experience and perception of the self in particular.

These apparently divergent theories can be reconciled into a phenomenological viewpoint, which lays "stress on the role of the conscious self-concept in determining a person's behavior" (Wylie, 1961, p. 3). This viewpoint differs markedly from that of other contemporary psychological theorists, for example, behaviorists and psychoanalysts.

Social Interaction Theory

The social interaction viewpoint had an early exponent in Charles Cooley (1902). Cooley stressed that perceptions individuals have of each other affect their behavior. For him, the individual and society were important to each other. Although the individual recognizes himself as unique and different from other persons, he always - if only through his use of language to communicate - holds an implicit relation to other persons. The self, or man's "social nature" of feelings and attitudes, is gradually learned in relationships with other persons, for example the family. Learning is also evidenced in individuals' adoption of different roles in relationships with different persons.
For Cooley, an individual was aware of himself in ordinary observations: he experienced it phenomenologically.

Another sociological theorist who devoted attention to social factors in the development of the self was George Herbert Mead (1934). Mead acknowledged his indebtedness to Cooley, although he believed the latter's emphasis was too biological. According to Mead, the self participated actively in its own development. Adoption of attitudes from a social group was necessary for an individual to communicate and to participate with others. Mead, like Cooley, theorized about different selves, functioning in relationships with different people. Unlike Cooley, Mead posited stages in self-development, the first based on the infant's responses to his own behavior, reflecting the reactions of other specific persons to him.

Although Thompson (1950) cited neither Mead nor Cooley, she indicated that findings of anthropology and sociology affected psychoanalytic theorizing in the 1920's and 1930's. She noted that Harry Stack Sullivan in particular viewed environmental factors, such as man's relation to society, as important in the development of his self-concept. For Sullivan, one's concept of self depended on attitudes other persons expressed towards him. He coined the term "reflected appraisals".

In contrast to these theoretical viewpoints of the social origin and nature of self-concept, the second line of thought, self-actualization theory, has come into being. To Creelman (1954), much of the writing of self-actualization theorists has dealt with the relevance of self-concept to psychological adjustment.
According to Raimy (1943) the self-concept was identified with a person's learned perceptions of himself, which in turn influenced his behavior. The self-concept was viewed as flexible yet enduring. Using college students as subjects Raimy looked for changes in approval or disapproval of self during a series of constant interviews. The significance of the study lies partly in Raimy's acceptance of specific kinds of statements about themselves as meaningful data, i.e. his use of a phenomenological approach. Raimy thus stressed evaluation rather than description of the self. What Raimy called a self-concept was both a learned perceptual system functioning as an object in the perceptual field and a complex organized principle which schematizes his on-going experience.

Raimy's dissertation (1943) was influenced by Carl Rogers, with whom he studied. While Rogers studied the existence of the status of the self-concept in his client-centered approach in psychotherapy, Raimy developed a construct of the self which was phenomenological in nature. Rogers (1947) laid great stress on the fact that changes in behavior followed the client's changes in perception. Rogers described changes in the perception of self, which also included perceptions about oneself in relation to others.

The phenomenological emphasis by Rogers and others has also taken into consideration development or actualization of potentiality not present at the time of a particular observation. Among the chief exponents of the theory of self actualization has been Abraham Maslow (1943), who ascribed importance to interaction of the individual with
his environment as he grew towards realization of his unique potential. Maslow noted the rarity of satisfaction of desire to fulfill one's potentialities or the need for self-actualization.

In 1950 the phenomenological view of the self had become the center of a new movement in psychology, having already generated a block of research studies (Rogers, 1949), and when Hilgard (1949) postulated in his APA Presidential address the need for a self in order to understand psychoanalytic defense mechanisms, and proper research on the self, psychologists listened.

The self-actualization theories tend to focus on present or phenomenal experience of the self and development of the self towards fulfillment of its potential. A third line of theory on the self-concept puts greater emphasis on individuals' perception of their experience.

Perceptual Theory

MacLeod (1947) added to the phenomenological approach the problems of social psychology, which included a distinction between the self and its environment. According to this approach, individuals apprehend other persons as different from objects and with varying degrees of resemblance to the perceiver. Such a viewpoint had an earlier exponent in Kurt Lewin, who wrote during the 1940's about the effect of an individual's perceived environment upon his behavior (Wohlman, 1960).

The term "social perception" was contributed by Bruner (1958)
to describe the inference of another person's characteristics. It appeared evident to Bruner that perception necessitates learned judgments about the meaning of objects or events and this is partly dependent upon the tension and memory which force selectivity and inattention.

Combs (1952), also stressed the importance of perception. According to him a person reacts to the environment as perceived from his point of view. Combs stressed that intelligence or effective behavior depends on the "richness and variety of an individual's perceptions of his environment." Recognizing physical and physiological limitations upon perception, Combs indicated the importance of an individual's learning opportunities. Combs viewed one's self-concept as having much influence on the selection of perceptions, which results in behavior tending to confirm the self-concept, thus forming a circular process. Combs advocated a phenomenological approach in studying individuals, of trying to understand their perceptions and the needs which are the basis for those perceptions. Jersild (1960, p. 116) says that the self includes among other things a perceptual component such as the way a person perceives himself and the image he has of the appearance of his body; it also includes a conceptual component - his conception of his distinctive characteristics, his abilities, resources, assets, lacks and ambitions. There is also an attitudinal component of the self including the feelings a person has about himself, both negative and positive. As a person reaches maturity, his attitudes relating to self include also the beliefs, convictions, ideals, values, aspirations, and commitments that comprise what we speak of as a person's philosophy of life.
Jersild distinguishes between the notions of real and ideal self, noting that comfort with an acceptance of self is associated with the small discrepancy between these. Jersild describes the phenomenal self as included in the individual's awareness, although unconscious motives, such as an idealized self-image, may affect his behavior. Jersild, in his description of the development of the self-concept, notes the combination of dynamic growth and resistance to change. It may even be difficult for one to see or hear or grasp the meaning of anything, favorable or unfavorable, that goes counter to his picture of himself.

Perceptual theorists have stressed that perceptions must be learned, and that learning takes place in social situations. Such a viewpoint thus affords a partial reconciliation of self-concept theories with the phenomenological approach.

Hamachek (1965) compiled a series of readings by theorists and researchers representing several frames of reference, but emphasizing the phenomenological viewpoint. Patterson (1965) stressed the effects of learned perceptions upon an individual's behavior. To Patterson, it was evident that the self originates through social interaction and is directed towards its own fulfillment. He views the self, unique to an individual, as a part of his phenomenal field, as a determinant of behavior. Thus the three streams of thought - social interaction, self-actualization, and perception - are evident in the viewpoint labeled phenomenological.

The literature thus suggests that the self develops as a result of a person's interaction with his environment and with other persons.
An individual's concept of self includes feelings, attitudes, perceptions and recognitions about himself, which in turn broadly influence his attitudes, perceptions and behavior.

**Self-Concept and Related Personality Theories**

Personality theory is behavior theory, and is an attempt to account in a systematic and orderly way for the personality structure. Hilgard (1962) defines personality structure "as the persistent features that give coherence to a personality" (p. 466).

Hall and Lindsey (1957) in their book describe twelve types of major personality theories in detail. A review of these theories indicates that there are several senses in which the self-concept has been employed by personality theorists. Either the self is seen as a group of psychological processes which serve as a determinant of behavior, or else it is conceived of as a cluster of attitudes and feelings that the individual has about himself. In one form or the other, however, the self occupies a prominent role in most current personality formulations. Not only are there specific theories such as Rogers', which are identified as self theories, but a large number of other theories employ this concept as a focal theoretical element. Among the theorists who in some way make prominent use of the ego or self-concept are: Adler, Allport, Cattell, Freud, Goldstein, Jung, Murphy, Murray and Sullivan. Only Eysenck, Miller, Dollard and Sheldon seem to conceive of behavior in such a manner that the self is not ceded an important role. Freud's psychoanalytic theory is
an influential theory of personality and his ego has been likened to the self of the modern self theorists. The slogan of Adler's personality theory is his "Style of Life", which he states as being formed very early in life from experiences. In his earlier writings, Adler said that it is largely determined by specific inferiorities, either real or fantasies, which a person has; in other words, it is his beliefs about himself. Adler also speaks of the creative self out of which man makes his own personality from the raw materials of heredity and experience.

Allport's "Psychology of the Individual" is often referred to as a trait psychology. Within this theory, traits occupy the position of the major motivational construct. He briefly describes personality as what a man really is. To him self and ego may be used adjectivally but he does not see the ego or the self acting as an entity distinct from the remainder of personality.

Kurt Goldstein is the leading exponent of organismic theory, which involves a "holistic" viewpoint. This says that the organism always behaves as a unified whole and not as a series of differentiated parts. Mind and body are not separate entities. His concept of self actualization suggests that there are patterns or stages of development to which the person progresses.

The total personality or the psyche as it is called by Jung consists of a number of separate but interacting systems. In his theory the self is the fully developed and fully unified personality.

Many modern personality theories have borrowed heavily from a common stockpile of concepts and Gardner Murphy's Biosocial theory
is an extremely eclectic theory. Murphy calls his theory of personality a biosocial approach because he conceives of man as a biological organism which maintains the reciprocal relationship with its material and social environment. Among the four different structures which Murphy says go into making up personality, he includes the concept of the self, which he defined very simply as the person's perceptions and conceptions of his whole being (1947, p. 996). In Murphy's theory, however, there are actually a number of selves, for Murphy discusses an ideal self and a frustrated self. Murphy also employs the term ego, which he defines as a system of habitual activities that enhance or defend the self.

Murray (1938) introduced his personality theory, in which he focused upon the individual in all his complexity. He emphasized the importance of environment in the development of personality. His theory shares with psychoanalysis the assumption that events taking place in infancy and childhood are crucial determinants of adult behavior. The superego as employed in Murray's theory is considered to be a cultural impact. The idealized ego is an ideal conception of the self or a set of personal ambitions toward which the individual strives.

Harry Stack Sullivan is considered to be one of the most eminent social psychological theorists, with his theory of interpersonal relations. Hall and Lindsey (1957) select Sullivan as the major figure in modern social-psychological theories. He is considered to be more independent of prevailing psychoanalytic doctrines and has been profoundly influenced by anthropology and social psychology. More
than any other personality theorists with the possible exception of Freud, Sullivan viewed personality from the perspective of definite stages of development. Whereas Freud held the position that development is largely an unfolding of the sex instinct, Sullivan argued for a more social psychological view of personality growth. Sullivan differs from other personality theorists in that he sees the self-system as a guardian of one's security which protects the person from anxiety. Because of this the self is held in high esteem and is protected from criticism. He goes on to say that although the self-system serves the useful purpose of reducing anxiety, it interferes with one's ability to live constructively with others. Another issue on which Sullivan differs is that he does not believe that personality is set at an early age. It may change at any time as new interpersonal situations arise, because the human organism is extremely plastic and malleable.

Carl Rogers is identified with a new method of psychotherapy which he called nondirective or client-centered (Hall and Lindsey, 1964, p. 475).

The origin of Rogers' self theory dates back to William James (1890), who, in his famous chapter on the self in Principles of Psychology set the stage for contemporary theorizing about the ego and the self. Rogers is not alone among the modern psychologists in his emphasis on the self. There are many who have contributed varying viewpoints to the role of the self in personality. Rogers, however, gained recognition because of his new type of therapy called nondirective or
client-centered. Briefly this means that the client is encouraged to explore unknown and dangerous feelings about himself which he has heretofore denied as being too threatening or too damaging to the structure of the self.

Rogers' theory of personality is eclectic as it represents a synthesis of phenomenology as also developed by Snygg and Combs; of holistic and organismic as developed in the writings of Goldstein, Maslow and Angyal; of Sullivan's interpersonal theory; and of self theory for which Rogers himself is largely responsible, although he acknowledges a debt to Raimy (1943) and Lecky (1945).

Rogers maintains that the self has only one basic motive, namely to actualize, maintain and enhance the self. It may symbolize its experiences so that they become conscious, or it may deny the symbolizations so that they remain unconscious, or it may ignore its experiences.

The self, which is a nuclear concept in Rogers' theory of personality, has numerous properties:

A. It develops out of the organism's interaction with the environment.

B. It may interject the values of other people and perceive them in a distorted fashion.

C. The self strives for consistency.

D. The organism behaves in ways that are consistent with the self.

E. Experiences that are not consistent with the self structure are perceived as threats.
F. The self may change as the result of maturation and learning (Hall and Lindsey, 1964, p. 478).

In his book, *Client-Centered Therapy* (1951) Rogers emphasizes "that every individual exists in a continuing, changing world of experience of which he is the center" (p. 483). The changing world of experience is Snygg and Combs' (1949) phenomenal field, although Rogers does not assume as Snygg and Combs do that all experiences are consciously perceived. Rogers goes on to explain that the person does not react to external stimuli or internal disturbances as such, but rather he reacts to his experiences as the stimulating or motivating conditions. Whatever he thinks is true, whether it is actually true or not, it is reality and it is the subjective reality which determines how he behaves (p. 484). Rogers cautions us that a knowledge of the stimulus does not suffice for predicting behavior; one must know how the person is perceiving the stimulus.

All of the above mentioned theories with the exception of Sullivan underscore the concepts of the unique individual and the creative self; however, the personality theories as postulated by Eysenck, Miller and Dollard and Sheldon do not refer to the importance of the self as a determiner of behavior. The centrality of reward or reinforcement as a determiner of behavior is most vividly emphasized in the reinforcement theory of Miller and Dollard. Central to Eysenck's view of behavior are the concepts of trait and type. The trait is simply an observed consistency among habits where a type is an observed constellation of traits. Thus type is a more generalized description
and includes trait as a component part. Eysenck (1947) was responsible for isolating two fundamental personality types which he describes as "introverts" and "extroverts". His investigations substantiated many of Jung's theoretical formulations. Nowhere in his description of personality did he refer to the concept of the self. Although Eysenck did put some emphasis on body build in the development of personality traits, the person who has attempted to build a whole personality theory around this has been Sheldon with his hypothesis of constitution psychology. His attempts were to develop a type theory based on bodily characteristics.

We have seen that there are several senses in which the self-concept is employed by personality theorists. The self is seen either as a group of psychological processes which serve as a determinant of behavior or it is conceived of as a cluster of attitudes and feelings which an individual has about himself. In one form or the other, however, the self often has a prominent role in most current personality formulations.

The Developing Self-Concept

Psychologists and others who have studied the growth of the self-concept in children agree that the self-concept does not appear to be present at birth and that it shows different features in children of different ages, supporting the assumption of a developmental process.

There are various theories about how the sense of self develops. The psychoanalysts assume that ego drives arise only from libidinal energy. Thus the ego is considered to be preformed and predetermined.
since it develops from a rudimentary ego which exists at birth and which is common to all human kind. It is shaped through experience, and is especially susceptible to infant experiences. Ribble (1955) recognized that the infant is not reactive as a personality through cortical associations of experiences before about four months of age.

Several writers, Gesell (1943), Munn (1955) and Olson (1959) emphasize the fact that ego development, like all phases of development, proceeds in a patterned, orderly way because of inherent growth impulses which are common to all human species.

The interactional theory of ego development as presented by Ausubel (1958) is based upon his comprehensive review of the historical and current literature on the subject. He views ego development as the "resultant of a process of continuous interaction between current social experiences and existing personality structure that is mediated by perceptual responses..." (p. 276).

Because of the philosophical problems connected with the concept of the self, psychology long managed without any such concept. There are as many terms and definitions of the self as there are self-theorists. As Lowe (1961) says, the concept of the self is a difficult one and not yet fully assimilated within contemporary psychology. However, it is receiving more emphasis and the modern self-theorists such as Rogers (1961), Allport (1961), Raimy (1947) and Sullivan (1953) regard the self as the core around which all behavior revolves.
Stages in the Development of the Self-Concept

The idea that the self-concept is nonexistent at birth and is differentiated out of the phenomenal field in the course of genetic development seems to be generally agreed upon (Taylor, 1960; Piaget, 1952; Jersild, 1960). Tiny babies do not seem to know where their own bodies leave off and the crib or toy begins (Ames, 1952; Hurlock, 1956). The boundaries of the self apparently begin to be differentiated as a result of exploratory activity and experience with the body around the sixth or seventh month (Murray, 1938). Niederland (1965) and Hoffer (1952) state that by the second year of life the infant has established an oral-tactile concept of his own body. Anderson (1965) in discussing the development of the self-image suggests the first year of life is most important, each succeeding year becoming of lesser importance until the image is essentially completed before adolescence. She goes on to say that although significant people such as teachers and peers are important to the individual in arriving at his self-concept, their influence is less than that of the parents because of the more advanced and less helpless age of the child. Many writers stress the importance of the parents on the development of the child's self-concept. They are his ego, the first extension of himself (Bossard, 1954; Gesell and Ilg, 1943; Whiting, 1953; Ames, 1952).

The importance of social interaction on the developing self-concept was first given wide publication by Baldwin (1913) and Cooley (1902). Sullivan (1952) uses the term "reflected appraisals" to signify the importance of other people's attitudes in forming one's self-
concept. The eminent sociologist Mead (1934) also emphasized the role of social influence and social experiences in the creation of the self-concept.

Another aspect in the development of self-perceptions has to do with the role of body-image. The baby discovers meanings about his body through handling the different parts and by looking into a mirror. This begins as early as the fourth or fifth month (Gesell and Ames, 1947). Self-consciousness as shown in shyness in the presence of others appears around the sixth month. The negativism occurring between the ages of two and three years indicates the child is well aware of the difference between himself and other people (Banham, 1952; Jersild, 1954). The child comes to discover himself through a progressive comparison of his own body with other people's bodies (Piaget, 1932).

According to Niederland (1965) body-image distortion is an inevitable outcome of early physical defectiveness. Perception of one's self, perception of others, reality testing, and other mental activities evolve against this background of an essential body image. Niederland goes on to say that patients with congenital or early acquired malformations are prone to suffer from a permanent disturbance of the self-image, which in severe cases may assume semi-delusional or almost delusional proportions.

Jersild (1960) in discussing the development of the self-concept also stresses the importance of the child's body-image, the picture he has of the physical properties of his body and his appearance. Another important phase in the development of a child's view of himself occurs
when he is able to compare himself with his peers and to test his
powers in competition with them. When a child knowingly competes, he is
using others as a standard against which to measure himself.

Social contacts, group play and other similar experiences add to
that by the time the child is three, the self-picture is fairly well
integrated. However, the self-portrait is gradually being modified and
rebuilt according to the experiences the child has had and the adjectives he hears used to describe him. Murphy (1947) states therefore
that it is vitally important to save the child from acquiring an
unfavorable picture of himself.

The years in middle childhood are sometimes considered a
relatively dormant period during which the structures of personality
established in early childhood remain more or less stable. Such a
view tends to overlook important changes which normally occur between
the ages of six and twelve. Intellectually the child becomes more
literate, and according to Piaget's formulations acquires the oper-
ational systems of mature intelligence on a concrete level (Piaget,
1950; Flavell, 1963). His increased intellectual abilities permit a
greater independence and mobility and a reciprocal relationship with
peers, in which the child is able to share goals, accept complementary
responsibilities and appreciate the viewpoints of others (Piaget,
1926; Hunt, 1961). Relationship with peers becomes salient (Ojemann,
1953) and interest in peer organizations is high (Jespild and Tasch,
1949).
The acquisition of these new intellectual, physical and social skills suggests that there will be a corresponding change in the personality of the child during this period of development. Specifically it is proposed that developmental changes in the child's conception of himself occur during these years. Since the self-concept is assumed to be an important agent for the organization of perceptions, the assimilation of experiences, and the determination of behavior (Jersild, 1960) such developmental changes in self-concept are both of theoretical and practical concern (Long et al., 1967).

In the development of concepts of self, children often build up two distinct concepts. (1) Self-concepts come from external experiences and contacts with others. The child has specific concepts relating to his body, his appearance, and how he compares in abilities of different types with the children with whom he associates. This type of concept is developed first, because the child's earliest experiences are objective. As the child reaches school age, subjective experiences become more meaningful to him. (2) As a result, he establishes another kind of concept of self based on his thoughts, feelings, and emotional experiences. It is often difficult for him to coordinate the subjective and objective concepts, and consequently he is apt to think of himself as a dual personality, with a specific appearance and with a specific personality make-up. Gradually, as the child reaches adolescence, the subjective and objective concepts of self fuse and the adolescent perceives himself as a unified individual (Hurlock, 1964).
Dinkmeyer (1965) refers to the self-factor as being

"a person's inner world. It is composed of his feelings, strivings, thoughts, and general view of self and is made up of the evaluations, convictions, attitudes, and assumptions upon which daily decisions are made. When one is in empathy with the self of an individual, then it is possible to understand his pattern of life. Knowledge of a person's life style enables us to look at the purposes and goals which underlie behavior.

"The self-factor cautions us against interpreting hereditary or environmental influences mechanistically. We must recognize that they interact and are complementary, that the story of development is not complete without including the role that self plays in dealing with varied influences.

"Here is where an understanding of the self or life style facilitates understanding of any given individual. The self is highly influential in the interpretation of hereditary and environmental forces. We have all observed physically handicapped children. Some function quite effectively, almost because of the handicap; others utilize the same handicap as an excuse for inadequacy, inferiority or incapacity." (p. 82)

Many writers stress the importance of the early years in the formation of the child's self-concept, especially as influenced by those people who are important to him, such as the parents. The baby does not seem to draw a line between himself as an ego structure separate from persons and people around him. Therefore, the influence of other people is closely identified with the child. What mother or father are, he himself is. He has no judgment apart from theirs.

In the sense that the baby identifies with his family in the early years of life so completely, he is helpless against their influence. He has little awareness of himself as a person, too little experience separate from theirs to question their opinions or to have a judgment of his own. Although he may fight hard for what he wants, he
has no self-criticism apart from their judgment of him, no sense of
righteousness or wrongness apart from theirs (Breckenridge and Vincent,
1960, p. 453).

Parents and family are still a source of self-concepts as late
as adolescence, as evidenced in a nation-wide study of boys 14 through
16 years of age (Survey Research Center, 1955). In answer to the
question ("What adult do you admire most, who would you like to be like
when you grow up?") 41 per cent named a member of their family, 25 per
cent named some other adult close to himself, 16 per cent named an
imaginary ideal, and 9 per cent named a living hero or a glamorous
figure such as a scientist, or a movie or TV star.

Although lacking empirical support, many researchers have
attempted to describe the developing self-concept in children, such as
social position between two-year-olds. This was interpreted by Jersild
as a sign of self-awareness and by Allport (1961) as a means of pro-
tecting self-esteem because two-year-olds typically place themselves
in opposition to the other children. This is known as parallel play.
Allport viewed comparison with peers as self-criticism in the develop-
ment of self-awareness. Ames (1952) somewhat supported this view in
her work on children's verbalizations. Her younger subjects, aged 18
months, made self-initiated verbalizations, whereas older children
nearer four years of age showed more responsiveness to other persons.
Hurlock (1964) labeled as "mirror images" the child's early concepts
of himself.

When asked to evaluate themselves on a reputation test, children
tend to put emphasis on favorable traits and those correlated with popularity or sex, such as amiability and docility for girls and daring and sportsmanship for boys. However, favorable self-judgments decline as children grow older, and favorable judgments of others increase, showing the effects of social learning (Hurlock, 1927a; Tuddenham, 1952).

Taking another aspect of how the child feels about himself, Hurlock (1964) defined self-acceptance in terms of self-confidence and an optimistic attitude towards dealing with life's problems. She suggested that self-acceptance results in acceptance of and by other persons. Wright (1960) used the term "self-esteem" in describing the positive aspects of self-concept.

Several researchers have devoted time to studying the stability of the self-concept, that is, the tendency for a child to retain the attitudes he has acquired and proceed and act consistently with them. Long, Henderson and Ziller (1967) conducted a study on children of the ages from 6 to 9, which she refers to as middle childhood. The self-concept, to these researchers, was seen as being a multi-dimensional set or constellation of constructs involving other persons, for they emphasized that the individual's orientation to the environment is largely social. They considered five sets of self-social constructs - individualization, self-esteem, power, identification and dependency. These components of the self-social system do not constitute an exhaustive list but rather exemplify certain aspects of the self-social schemata which seem of particular interest in
relation to development during middle years. This study applied a non-verbal method to the study of the self-concept in middle childhood. In this method the subjects selected and arranged symbols to represent themselves in gradation to salient other people. It was assumed that individuals can communicate various aspects of the self-social schemata symbolically and that their symbolic patterns have common meanings. The assumption was made, for example, that physical distance in the test represented the psychological distance between elements of the child's life space.

The results of Long's study showed that the representation of the self as being different increased with grade in school. Under self-esteem a significant effect for grade was found in relation to self-esteem. The highest score was found in the first grade, and there was a sharp drop in the second grade, which displayed the lowest score. Scores rose in the third and fourth grades and declined somewhat in the fifth and sixth. The results on the effect of power and self-concept showed that the most significant effects for power were found in relation to father. With regard to identification, the girls identified more with mother than did boys. A significant effect for grade was found in relation to identification with friends. Identification decreased between the first and second grades but increased thereafter. The greatest identification with friends was found in the sixth grade. A significant effect for grade was found with social dependency. Contrary to the hypothesis, the trend from the first to the sixth grade was for greater dependency the higher the
grade in school.

The significant results relating to grade level and self-esteem were largely due to the difference between the first and second grades. The first grade received the highest mean score and the second grade the lowest. These findings are in harmony with Gesell and Ilg's (1946) description of the brashness of the six-year-old and the self-criticism of the seven-year-old, and seem relevant to Piaget's observation about decline of egocentricity about this time (Hunt, 1961). Contrary to the original hypothesis, this study showed a social dependency increased for grade level.

The Nonphenomenal Self and Problems in Testing

As we stated at the outset, theorists who accord a prominent role to constructs concerning the self are not consistently or exclusively phenomenological. Typically, however, they are very vague and incomplete as to (1) what kinds of nonphenomenological constructs shall be admitted into their theories; (2) how these constructs shall be articulated into their system of "postulates"; and (3) how these non-phenomenological determinants shall be tied to observables. Nevertheless some effort has been expended by empirical workers in attempts to measure such processes as unconscious aspects of the self-concept and other nonphenomenological variables which they believe to be pertinent to self theories. Researchers who do this seem to base their work implicitly and/or explicitly on two lines of reasoning: (1) It is obvious that the phenomenal self, at least as measured by currently
used instruments, is far from providing a sufficient basis for accurate predictions of Ss' behaviors. This lack of predictive power may be presumed to stem in part from the fact that instruments which purport to measure the phenomenal field will provide an incomplete inventory of relevant variables, no matter how highly perfected they may eventually become for the purpose of measuring the phenomenal field. (2) Because of theoretical reasons one might expect that important characteristics of S and his relation with his environment would be unavailable to his phenomenal field. Theorists point out that much important learning occurs pre-verbally, and the need to maintain self-esteem will lead to repression and denial (Wylie, 1967, p. 250).

Some workers, apparently strongly influenced by Freudian views, seem to imply that the "unconscious self-concept" will be more potent than the phenomenal self in determining behavior. (See Fisher and Cleveland, 1958, for example.)

With the measurement of such nonphenomenal determinants we are again presented with the question of construct validity. With few exceptions, however, these specifications for establishing construct validity have been almost entirely ignored by users of nonphenomenal indices, and such measures have remained largely unvalidated.

In particular there is a unique and difficult requirement of discriminant validity for this type of measure which has received little or no recognition: if one is to say that a certain projective response or score represents an unconscious attitude toward the self,
one must prove not only that S holds this attitude but that he is unaware of it. At the very least one should check to see whether the same attitude might be consciously present, as inferred from a self-report. If the inferences from the self-report and the projective measure differ, one may then have grounds for exploring the more complex assumption that the projective measure is revealing an unconscious self-attitude. Almost universally, however, this measurement problem has been overlooked by workers interested in the measurement of the so-called unconscious self-concept.

Fisher and Cleveland (1958) have considered "body-image" to be an important, largely nonphenomenal aspect of the self-concept. They point out that the current use of the term is loose and generalized, with very few specific connotations. It refers roughly to "the body as a psychological experience, and focuses on the individual's feelings and attitudes toward his own body" (p. 10). The word "image" they consider misleading since they, and most workers who use the term, regard the body-image as being largely non-phenomenal.

In reviewing commonly used figure drawing techniques as a measure of "body-image", they conclude:

"Although the figure drawing may be a potentially valuable method for studying body-image...it is still mainly used in a vague, impressionistic manner and there has been limited success in differentiating which aspects of the drawing are linked with body-image, which with drawing skill, and which are due to the manner in which the drawing is obtained" (Fisher and Cleveland, 1958, p. 35).
Brown and Goitein (1943) assume that skill in drawing plays no part in their test, in which S, while blindfolded, draws the outline of himself from the back, the side, and in a lying-down position. They assume that the drawing portrays not merely the physical experience of a man's bodily integration, but an "inner intuition of self-integration". However, no pertinent validity data are presented.

By far the most widely studied body-image index is Fisher and Cleveland's Barrier score on the Rorschach. At the outset of their work they assumed that this score has validity for inferring the degree to which people "experience their body boundaries as definite and firm versus indefinite and vague" (Fisher and Cleveland, 1958, p. 56). The sort of boundaries which the individual attributes to his body was expected to "tell a good deal about his overall life-building operations" (Fisher and Cleveland, 1958).

**Instruments for Measuring Phenomenal Self-Concept**

In general, the major devices to measure the phenomenal self-concept may be classified under one of four categories:

1. Q-techniques
2. Likert-type
3. Semi-projective type of devices
4. Check-list devices

Principal instruments designed or adapted for the direct measurement of self-concept in children have included a variety of self-rating scales, check-lists, and questionnaires. Other
instruments from which children's self-concepts have been inferred are various rating scales used by other persons to describe a particular child. Although projective techniques have been frequently proposed as a measure of self-concept, their value for this purpose does not appear to be strongly established.

Free response questions or semi-projective techniques allow the subject to respond in an open-ended fashion to some rather general types of questions. It has been found possible to score this device reasonably objectively by using a predetermined scoring system. It has been more successful with older college students than with younger children. Wylie (1967) believes that free response questions appear appropriate for determining opinions and attitudes, although they are difficult to quantify. Only a single aspect of an attitude may be mentioned, and examples or clarifications may be omitted.

Direct Questions

Among direct types of self-report measures are Q-sorts, introduced by Stephenson (1953). The method has been popular as a quantifiable, though time-consuming, means of measuring self-concept. Although it relies largely upon the subjective feelings of a person, it is flexible and can be used to investigate many kinds of problems. The subject sorts a number of items into seven or nine piles with a forced choice in the number of cards to be placed in each pile. These items contain a large number of adjectives or statements which the subject is to arrange along a continuum in a quasi-normal
distribution according to the similarity or dissimilarity to himself, his ideal self, etc. Q-sorts are among the self-concept indicatives which have been used fairly extensively, although seldom have two studies used the same items, a procedure which has been criticized by Block (1961b), among others. With few exceptions, these indicators of self-concept have shown moderate positive correlations with measures of ability and achievement (Wing, 1966).

Adjective Check-List

Among other instruments used to measure the self-concept are adjective check-lists, which have also gained popularity. Sarbin and Rosenberg (1955) proposed a rationale for their use and noted the frequent use in the English language of adjectives to refer to personal attributes. A disadvantage of the technique was the all-or-none ratings with no provision for intensity of reaction (Strong and Feder, 1961). This criticism, however, is not applicable to studies in which subjects respond using Likert-type ratings.

Likert-Type Scale

The Likert-Type Scale is a structured version of the adjective check-list in which a five to ten point scale may be used to rate statements of personality traits. The rating scale usually ranges from "never" or "seldom" to "often" or "most of the time". The values of the ratings are then used to arrive at a total score for all of the items. Wylie (1967) noted the need for appropriateness of statements
to be used in self-concept research. She commented on the wise selection by Butler and Haigh (1954), who used statements in their instrument which were based on spontaneous remarks of patients in psychotherapy. Similarly, studies based on Jersild's (1952) findings, (e.g. Copple, 1961; Curtis, 1964; Perkins, 1958; Piers and Harris, 1964), used children's statements as a basis for self-concept indicators.

Reliability

Among the general methodological problems in studying self-reports is that of reliability. For many such instruments, the coefficient of reliability (Pearson r or Spearman rank-order correlation) has been computed. These vary to some extent from one study to the next, according to the intent of the study, and depending on whether intra-test, inter-rater, or test-retesting have been used. Several examples of tests using different methods of testing reliability will be cited.

Intra-test reliabilities, usually split-half correlations, have frequently been used, although Wylie (1967) has questioned whether such assumptions as homogeneity of test-halves or random samplings of items have been fulfilled. For Payne's (1962) adjective check-list, reliability (presumably split-half) for students in grade 11 was between .88 and .93. The fact that he considered a limited aspect of behavior, that is, children's estimates of teacher's ratings, may perhaps account for this high consistency. Bills et al. (1951)
obtained reliability coefficients (presumably split-half) in the .80's in his study of 44 subjects using the 49 adjectives of the Bills' Index of Adjustment and Values. Bruce (1957) noted that reliability scores for the ideal-self discrepancy on his self-concept scale were low, .15 and .16, which may have been partially due to the fact that his scale contained only ten items. Also available are test-retest data for those indicators which have been used on more than one occasion. In some instances, investigators have not specified the intervals; in others, it has generally been between two and six weeks.

With fourth and sixth graders, using a 50 item Q-sort, Perkins (1958) also used the test-retest method of checking reliability. His subjects were children in grades four through six, and they used a modification of Bills et al.'s (1951) Index and obtained a test-retest coefficient in the .70's based on a two week interval for the self-ideal discrepancy score. For Coopersmith's (1959) self-extreme inventory, test-retest reliability, based on 30 children in grade five after five weeks, was .88.

Questions related to reliability, as considered here, are among the factors affecting the conclusions that can be drawn from studies of self-concepts. Intra-test coefficients are generally in the high .70's and .80's; test-retest coefficients are somewhat lower.

Validity

When we consider the validity of questionnaires, rating scales, and check-lists, there is for most of the instruments little or no
published information on what universe of self-conceptualization is represented by the items. Wylie (1967), in discussing the validity of self-concept instruments, said that the ease of falsification and possible influence of responses seems greater for the rating scale and questionnaire techniques than for Q sorts. So she concludes that no method, yet, has been devised to solve all possible problems satisfactorily.

In her summary of research on the self-concept Wylie (1967) criticized not only measurement instruments themselves, but also the circumstances under which they are used and the techniques by which the results are analyzed. Such methodological criticisms include the fact that procedures may not be stated clearly enough to permit replication. Control groups may be omitted or the number of characteristics may be so inadequate that irrelevant variables markedly affect experimental results. Wylie mentioned the effect of unfamiliarity of the words used by the experimenter as a possible factor affecting the subject's reported self-concept. Other factors presumed to affect the validity of self-reports or self-concept include whether or not the subject can retain anonymity and the effects of rapport, although Wylie suggests that these two have rarely been specifically demonstrated.

**Self-Concept Studies**

A review of the literature indicates that psychologists and other researchers interested in the development of the child are now
concentrating on factors which they believe are included in an individual's concept of himself, such as feelings, attitudes, perceptions and cognitions. A study which confirms the multi-dimensionality of self-concept is that of Smith (1960), who factor analyzed self-ratings made on a 70 item semantic differential using psychiatric patients as subjects. Among the factors which he interpreted were self-esteem, anxiety-tension, and body-image. Smith suggested that the existence of different factors might account for obtained low relationships between various self-concept tests and other variables.

It appears to writers that the many factors which are involved in development of the self-concept could be considered separately. In considering, first, the effects of physical characteristics upon self-concept, some researchers hypothesize a separate physical self-concept, whereas others maintain a more global emphasis (Wing, 1966). Under physical characteristics, changes in self-concept are concurrent with bodily changes and with changes in others' attitudes. Hurlock (1964) distinguished between physical and psychological self-concepts, suggesting that these concepts have separate origin and development before being integrated.

Research on body-image has attempted to relate subject's feelings about their physical characteristics with other variables. Bledsoe and Garrison (1962) noted that self-reports of boys stressed physical characteristics and athletic skills to a greater extent than did those of girls. Copple (1961) in his study on 102 fifth-grade boys suggested that the self-concept was based on others' judgments
about one's skills, especially motor skills. Such judgments, in turn, result in approach or avoidance of activities. Although "athletic self-concept" showed a positive correlation with peer and teacher ratings, intelligence and achievement scores accounted for more variance in the prediction of reading achievement. Self-descriptive statements obtained from students in grades 8 through 10 in Jersild's (1952) study showed that students in these grades were more concerned about physical attributes than were those of other ages. It was the teachers' ratings of physical ability which were closely related to the self-reports of physical ability of the upper grade girls, but not for the girls in the primary grades as found in Sears' (1946) study. Sears suggested that athletic self-concepts influence both social life and attitudes towards school. Mussen and Jones (1957) concentrated their study on the rate of maturing, using 17-year-old boys. This study compared boys who had matured late with those who had matured early. This study showed that in the Thematic Apperception Test responses, 17 late-maturing as compared to 16 early-maturing boys showed significantly greater negative feelings about themselves and perceived their parents as rejecting. This was a particularly interesting study as it is one of the few which has been longitudinal in nature, as the boys were again retested during the early 30's by Jones (1965). She found that the groups were no different in physical measurements but that the early-maturers scored higher on scales of the California Psychological Inventory which suggested socialization and responsibility, and scored lower on the scale of flexibility. Mussen and Jones also conducted a
study on 17-year-old girls in 1958, using the same pattern as their study on the boys. Here again they found that negative characteristics were found principally among late maturers, including domination by parents and need for dependency. Late-maturing girls showed more concern for recognition and also assumed leadership positions.

Although research data, such as the above, suggests relationships between self-concept and physical characteristics, it is evident that the latter are confounded with other influential factors, including, for example, attitudes of other influential persons, such as parents, teachers and peers.

**Intellectual Abilities**

Bledsoe and Garrison (1962) and Bruck (1957) found moderately positive relationships (.30's) between reported self-concept or ideal self and tested intelligence or achievement. Other studies, for example Coppie (1961) and Brookover, et al. (1964) investigated the relationship between self-concept and intelligence but did not find a significant relationship. Coppie's study showed a higher inter-correlation between standardized tests of intelligence and achievement than between these tests and self-reports of self-concept. Brookover et al.'s subjects were 1050 children in grade seven. Their results showed only a moderate positive relationship between self-concept and grade point average and the self-concept showed a very low relation to IQ scores. Girls and high achievers obtained higher self-concept ratings.
To gain evidence for her hypothesis of a circular relationship between self-esteem and academic achievement, Sears (1963-1964) devised self-report measures which she used with 422 children in grades five and six and 70 first and second-graders. Children in the upper grades of superior (above the mean of 115 IQ) and average (below the mean) mental ability, were considered separately. For boys, self-report was related to attitudes towards school and to teacher ratings of happy qualities and physical ability. Reported satisfaction with self for both boys and girls was positively correlated with likings for other children and attitudes towards school. Reported satisfaction was also associated with classmates' expressed likings of boys and teachers' ratings of girls' physical ability. This study was interesting in that it differentiated between the teachers' ratings of ability and the superior and average self-concepts of boys. It was shown that average boys, and both superior and average girls, in contrast, showed no agreement between self-reports of ability and test scores, but showed moderate agreement between self-report and teachers' ratings. The superior boys' self-concept of mental ability agreed with test scores and, to a smaller extent, with teachers' ratings of ability. Her study also included the stability of self-concept and it was found that there was a high stability of self-concept from fall to spring, except for average boys. Girls also showed moderate agreement between self-report and peer ratings.
Psychological Adjustments

One of the factors assumed to affect reported self-concept is adjustment, although in many studies there has been little relationship between these two. Perkins (1957) suggested that a minimal discrepancy between the child's conception of his real and his ideal self was associated with good adjustment. He used 251 subjects taken from grades four and six. They ranked themselves on a set of 50 statements to describe self and describe ideal self. When redone, after a period of six months, the two sets of ratings were more congruent, especially for girls in the sixth grade. After ruling out tested intelligence and reading achievement, Perkins concluded that the latter group showed more stable self-concepts. Rogers et al. concluded that the realism of these children's perceptions of self and environment and their self-acceptance were factors most highly related to their later adjustment.

Academic achievement and emotional adjustment among fourth-graders was studied by Kennedy (1965). He used a combination of instruments and found a low relation between academic achievement and emotional adjustment.

Another area of school ability was studied by Castaneda et al. (1956) using the Children's Manifest Anxiety Scale. The results showed negative relations between anxiety and achievement. Among the variables studied, arithmetic underachievers showed particularly low emotional adjustment. His female subjects showed a higher self-concept than boys on the Lipsett Scale (1958) and this suggested either
conformity and/or defensive behavior being responsible.

A frequent tendency found by Wylie (1967) in her survey of self-concept research was for subjects to overestimate their own capacities. Although overestimation did not necessarily indicate adjustment, self-depreciation, according to Wylie, has been shown in some studies to be related to maladjustment. Bower (1960) was among the researchers whose data has supported the concomitance of self-deprecatory scores and low adjustment.

**Interpersonal Interactions**

Parent-child interactions have been stressed in the developmental studies on the self-concept. The great importance of parent-child interaction on the development of the self-concept has been described by many writers who believe that the self-concept is learned and that the parents have the earliest and most frequent opportunity to influence children's learnings.

Studies based on the relationship between the parents and their children have shown them to be influential on the child's developing self-concept. Grams' (1963) study indicated that parental acceptance and consistency arouse consistent self-evaluation in the child and result in his acceptance of others and his strivings towards accomplishment.

A study conducted among high school juniors and seniors on the effect of perceived parental attitudes upon children's self-concept was conducted by Rosenberg (1963). He found reports of parental
differences negatively related to self-esteem, while students who reported punitive treatment by their parents tended to have higher reported self-esteem than did those who reported only indifference.

Medinnus (1965) using an older group who were college freshmen, also studied this area and found that when the subjects perceived their parents as loving they also saw themselves as self-accepting. Medinnus noted that the relationship was generally closer for males than for females. A study was conducted in a high delinquency area by Reckless et al. (1956) with a sample of 125 sixth-grade boys who did not already have court records and who were nominated by their teachers as likely not to become delinquents. Their self-picture stressed adherence to law and conformity to others' expectations. In rating their families, these boys viewed their families as satisfactory and their parents as understanding.

Interaction with Teachers

With the emphasis of social experiences on the developing self-concept, teachers assume an important role, along with that of the parents, peers and other important adults, in the developing self-concept. Staines (1958) selected two classrooms of ten-year-olds whose teachers showed a divergency in attitudes. One teacher showed a preponderance of positive evaluative statements about his class, in contrast to the other's stress on performance and status. Staines selected the former teacher to study his pupils' self-ratings and to help them become more aware of themselves. Children were given a
modified Q-sort prior to this experimental period and again 12 weeks later, in both classrooms. At the end of 12 weeks the former class showed differences in their certainty about self-report statements and in movement away from extreme ratings towards a more moderate position. Staines concluded that teaching methods and adjustment were closely related, and that the first teacher's deliberate stress on self-knowledge had brought about favorable changes. Studying the child's attitude towards school and the teacher's attitude, Schmuck and Van Egmond's (1955) research suggested that a congruence between the child's and the teacher's attitude is an important influence upon academic achievement, as is a child's expressed satisfaction with his teacher. Other variables were important for boys but not for girls, including children's perceptions of parents' attitudes towards school.

**Interactions with Peers**

During school years, according to Gordon (1959), experiences tend to be interpreted in the light of the already formed self-concept, rather than having the self-concept change. As children reach adolescence and approach greater independence, peers become more important than adults in affecting self-attitudes. Studies on the interaction with peers have been described in a following section discussing the effect of peer ratings on self-concept. An interesting study, which combined the effects of peer and parents on the developing self-concept, was conducted by Kohn (1961). His subjects were 226 fifth-graders and 179 twelfth-graders. The subjects, parents and classmates
each evaluated the subjects according to a five point scale on 20 brief descriptive items of behavior. The results showed that the self-peer relationship had a higher correlation than the self-parent: namely, a correlation of .40 for self-peer and for self-parent it was .20. This shows that the relationship was positive for evaluative ratings and for activity ratings. Sears (1963) observed that judgments of peers and teachers were more stable over the school year than were self-ratings, suggesting the influence of others' judgements upon self-concepts, rather than the reverse.

**Discrepant Perceptions of Self**

Researchers in the area of self-concept have been concerned about the occurrence of a difference between one's self-rating and the rating given by others. Relatively little research has been done in this area; however, Coopersmith (1959) distinguished genuine and defensive self-esteem, the latter indicative of large discrepancies between self-ratings and other estimates of self-esteem behavior. Four groups of 12 children, each in grades five and six, were studied. These were selected on the basis of showing various combinations of high and low scores on self-ratings and ratings by teachers. Children who showed marked disagreement in either direction between self-ratings and teacher-ratings were similar to each other in measurements of manifest anxiety and ideal self. They differed in other measurements, however, according to whether their self-perception was higher or lower than behavioral ratings. Those who perceived themselves higher than did teachers scored lower on the sociometric rating, lower on the
achievement test and lower on need for achievement, despite apparent adequate ability. Coopersmith interpreted this pattern as indicating defensive misperception of others' rejection and of low achievement. In contrast, children with discrepantly low self-reports were hypothesized to have high internal standards and goals.

Self-ratings and Ratings of Others on Selected Traits

Miyomoto and Dornbusch (1956) report an apparently significant relation between S's self-ratings and others' ratings of S on four traits: intelligence, self-confidence, physical attractiveness, likeableness. They also found, however, that self-ratings tended to be closer to S's perception of how others would rate him than to others' actual ratings of him. S's were college students, in fraternities and sororities. No significance tests are given.

In a report on Steier's unpublished work with four groups of fifth- and eighth-grade children, Russell (1953) gives self-peer correlations ranging from +.22 through +.49 on social adjustment and from +.45 through +.55 on self-adjustment. Self-teacher correlations ran from +.28 through +.65, considering both kinds of adjustment. The rating scales were adapted from the California Test of Personality. Self-standard test correlations on academic achievement ran from +.35 through +.54, while self-teacher correlations on academic achievement ran from +.36 through +.61.

With the exception of one investigation, none of the studies mentioned thus far required S to guess where others would rate him.
That this might be a factor in lowering the obtained correlations is suggested by the findings of Flyer, Barron, and Bigbee (1953). They obtained self-ratings from air officer candidates on six traits, in answer to two questions: "How do you see yourself?" and "How do others see you?" One wonders if the correlations would have been even higher had S been instructed to guess how these particular others (i.e. the members of his current living-group) would rate him.

On the other hand, Wylie's (1957) findings seem not to be in line with such a speculation. Her basic airman S's were specifically instructed to guess how their living-group members would rate them, yet she obtained only one significant "r" (for intelligence) out of five traits.

Russell (1953) summarizes briefly several early or unpublished studies in which children were found to overestimate their standing on a variety of achievements and personality characteristics. In four of these, girls overestimated their standing more than did boys, or rated themselves higher than did the boys.

The only study not in agreement with those listed above is that of Israel (1958). He found that female student nurses in Stockholm tended to underevaluate themselves significantly on leadership, orderliness, intelligence, and appearance when rank-ordering themselves among the peers in their living-group.

Wylie (p. 315) concludes that self-overestimating trends are more frequent. Studies published since 1948 seem to indicate a somewhat greater tendency toward overestimation among male S's, while the
trend in Russell's report on earlier or unpublished studies was toward overestimation among females more than among males. In any event, since the sex groups studied are not known to be comparable with respect to possibly relevant variables, one cannot draw any firm conclusion about sex differences at this time.

Is accuracy of self-estimate a function of the variables being estimated? The answer appears to be "Yes", although we cannot be sure why this is so. Those traits on which S would have most objective evidence, on a basis permitting him to compare himself uniformly to others, are usually among the most accurately estimated (e.g. characteristics such as intelligence and leadership). The studies of Amatora (1956), Green (1948), Israel (1958), Wylie (1957), and Webb (1952) support this idea.

The available studies of sex differences in self-concept have been directed mainly toward two questions: to what degree have males and females accepted particular sex role stereotypes as applicable to men (or to women) in general? To what degree have males and females accepted particular sex role stereotypes as applicable to their own actual or ideal self-concepts in particular?

Three studies by McKee and Sherriff have explored questions concerning male and female stereotypes (McKee and Sherriff, 1957, 1959; Sherriff and McKee, 1957). When they used a generalized rating scale, they found that both male and female college students reported that males were superior to females. This finding was accentuated when no neutral response step was provided. Two other methods also led to the
conclusion that both sexes have less favorable concepts of the female.

There may be some sex differences with regard to discrepancies which S's perceive between actual self, personal ideal for self, and social expectations. Resolution of possible contradictory results in this area awaits further research.

Effect of Disability on Self-Concept

Studies of the effect of body-image distortions on the self-concept have been conducted in the medical field by Neiderland (1965), Bell (1965) and Blos (1960). These three studies suggest that patients were found to have a noticeable increase in fantasy life and tended to use such defense mechanisms as denial, undoing, isolation, regression, reaction formation, displacement and projection.

Pomp (1965) conducted a study based on the self-concept distortion in the physically handicapped child. He compared disabled and non-disabled seventh- and eighth-grade students, using a revised form of the Bills Index of Adjustment and Values to measure self-concepts and ideal self-concepts. He found the disabled had a greater discrepancy between their actual self-concept and their ideal self-concept.

The majority of the literature on the self-concept emphasizes the importance of interpersonal relationships, as well as the effect of distortion in the body-image. A review of this literature indicates that it is difficult to find clear-cut relationships between reported self-concept and other factors. On the other hand, such findings also suggest the possibility of modifying self-concepts as a function of
interpersonal relationships. The purpose of this present research, however, is primarily to obtain further data on the effect of physical disability on the developing self-concept.

**Physically Handicapped**

Although there is considerable literature on the behavior and personality development of the physically handicapped, the amount of systematic research is very limited. There are many descriptive accounts, including biographies and autobiographies (such as those written by Carlson, 1941, and Brown, 1954). In Wright's book (1960) a full bibliography of these is given, together with many questions. One of the conclusions arrived at by Barker et al. (1953) was that many of the past studies were based on inadequate data with regard to behavior and personality adjustment and that therefore their findings could not be accepted unreservedly. A recent review of the literature points to the unhappy fact that now, twelve years later, the situation is virtually unchanged.

It would appear that the main reason for the lack of research in this area is that the interpretation of crippled children's test responses is complicated because the tests were designed for, and standardized on, nonhandicapped children (Mussen and Newman, 1958). Barker et al. (1953) also points to the chief methodological problems in somatic- psychological investigations: selecting representative subjects and securing adequate controls; the lack of instruments for measuring physical disability; and the lack of appropriate tests for
assessing behavior and personality difficulties.

In the survey of the adjustment of physically handicapped adolescents (Norris and Cruickshank, 1954) it is suggested that while these children share all of the problems common to this developmental period, disability adds a further dimension. Among the more reliable findings is thought to be the fact that there are negligible differences on paper and pencil tests between handicapped and nonhandicapped youth, but that the former are less mature, particularly in their reactions to meeting new situations. In a comparative study of 64 children, half of whom were crippled, Martorana (1954) found that mental age, sex, the age of onset and the severity of the handicap seemed to have little influence on emotional adjustment. Noel (1955) lists the following as being the most important frustrations discovered among the handicapped: the psychological repercussions of physical limitations on the self-image; physical and social insecurity; loss of prestige in the eyes of others; and rejection by society. Glick (1953), studying the emotional problems of 200 cerebral palsied adults, found that the relatively mildly disabled tended to show poorer adjustment than those whose handicap was more severe. This group consisted of 200 ambulatory cerebral palsied people between the ages of 18 years and 45 years who had applied directly to these organizations for help with their problems. In almost three-quarters of the cases interviewed, there were manifestations of behavior indicative of emotional maladjustment. In fact the emotional maladjustment in twenty per cent of the cases was serious enough to preclude the possibility of job placement. This judgment was predicted
upon the following factors: unrealistic attitudes; intense feelings of insecurity; extreme immaturity; excessive fears; strong feelings of inferiority; low frustration tolerance; problems in interpersonal relationships, such as inability to get along with family, friends and contemporaries; and lack of motivation.

From this survey it was found that almost eighty per cent of those having mild physical disabilities found it more difficult to adjust to their handicaps, accept their limitations, and plan realistically for the future.

There have been numerous studies comparing the emotional and social adjustment of handicapped and normal subjects. Kammerer (1940) studied fifty cases of sclerosis and thirty cases of osteomyelitis, comparing their pattern of personality traits with those found among the nonhandicapped. From these results he concluded that physical handicap does not inevitably lead to emotional maladjustment. Though some personality difficulties were found among the disabled, the author suggested that their occurrence depended upon the number and severity of problems confronting the crippled child. He criticizes those who put forward the opposite viewpoint, on the grounds that in most cases, these are merely opinions, unsupported by experimental evidence.

Cruickshank (1951) administered a Projective Sentence Completion Test to 264 physically handicapped children to investigate the relation between disability on the one hand, and fear and guilt feelings on the other. It was found that the handicapped had more fears and guilt feelings than those of normal physique; the latter felt less need to
make amends for any wrongs that they might have done. The same author (Cruickshank, 1952) administered a sentence completion test to 264 physically disabled children and to a similar number of normal controls. The handicapped group was found to have fewer interests and their overall adjustment was found to be less mature.

In determining the effect of a motor handicap on the level of aspirations, Wenar (1953) studied three groups of matched children, consisting respectively of severely handicapped, moderately handicapped and nonhandicapped subjects. There were twelve children in each group. From the results it was concluded that the handicapped child maintains a realistic attitude towards his capabilities for a limited period only, and reacts to failure and frustration by setting himself an even higher goal; this contrasts with the behavior of the nonhandicapped group, which lowered its level of aspiration. Mussen and Newman (1958) investigated the relationship between the motives of handicapped children and their general psychological adjustment. From 79 handicapped pupils attending an open-air school, 14 well adjusted and 13 poorly adjusted children were selected and tested on the Thematic Apperception Test. It was found that strong dependency needs are more characteristic of well adjusted than poorly adjusted children, and that strong achievement needs are more prevalent among the latter. This indicates, the author suggests, that a realistic attitude towards the disability needs to be taught, both at home and at school.

The existence of behavioral differences between the congenitally handicapped and those whose handicap was acquired after birth has been
studied by Lange (1959). The Rosenzweig Picture Frustration Test was administered to 80 pupils at a hospital school, half of whom had congenital handicaps. The age range of the sample was from five to twenty-one years. No significant difference in frustration reactions was found between the two groups. Schechter (1961) concluded on the basis of clinical observations that while children with congenital, as compared with acquired, disabilities do not show a common personality pattern, there are similarities in emotional reactions. Among them he lists: a denial of the handicap, punishment as the explanation for it, and depression as its ever-present effect.

Smits (1964) had two purposes in mind when he conducted his study on disabled adolescents: namely, to investigate the effect of the obviousness and severity of physical disability and self-concept scores and the self-acceptance scores of disabled adolescents and the way others perceived them. His subjects were 125 male and 75 female adolescents, attending school for the normal in the St. Louis area, who had a physical disability sufficient for eligibility for rehabilitation services from the Missouri Division of Vocational Rehabilitation. These subjects were given a modified form of the Index of Adjustment and Values (Bills et al., 1952), yielding a self-concept score and a self-acceptance score. The subjects were also rated by the teachers, mothers and classmates. The disability ratings and the sex of the subjects were used to assign the subject to groups. The mean self-concept of those adolescents with mild physical disability was significantly higher than the mean self-concept score of those adolescents with severe physical
disabilities (.05 level of confidence). The ratings physically disabled adolescents received from their classmates were significantly lower than the ratings physically normal adolescents received from their classmates (.01 level of confidence). Statements in the literature emphasizing the psycho-social importance of physical beauty for the female and physical strength for the male are not supported by this study.

On the basis of comparative study of crippled and non-crippled children Gates (1946) stressed the importance of positive family relationships for the emotional and social adjustment of the handicapped. In another study of children handicapped as a result of polio-melitis, Tuttman (1955) investigated their reactions to the physical disability in relation to the parents' personalities, with particular regard to authoritarianism. The subjects were 20 boys between the ages of seven to nine years. It was found that children of more authoritarian parents had more difficulty in accepting their disability. Saxter (1958) considered that while the struggle to overcome a physical handicap, as well as the reactions of other children to it, can lead to emotional difficulties, the relationship with parents and siblings is of the greatest importance in coming to terms with the disability. In a book directed not only to the professional worker but also to the patient and his family, Wright (1960) has argued that blindness, deafness and multiple handicaps are difficult obstacles. She argued that the manner in which an individual accepts his defect is conditioned primarily by the attitudes of those around him, especially his parents.
In her view, there is no ground for the commonly held belief that the disabled react less adequately to frustrating situations than do those without any handicap. Both on theoretical grounds, as well as on the basis of research evidence, she concluded this view to be unsupportable, even though there are as yet few well executed studies on the problem of frustration tolerance.

Richardson et al. (1964), in studying the effects of physical disability on the child's description of himself, used self-descriptions from 107 children with handicaps and 128 nonhandicapped children aged nine to eleven. Differences in self-descriptions between children with and without handicaps reflected the functional restrictions on physical activity, deprivation of social experience and the psychological impact of the handicap.

A study done in Canada by Prosen (1965) was related to physical disability and motivation. This study showed that difficulties in motivation are often based on disturbances in body-image which are related both to the premorbid personality and the handicap. Treatment must involve the body-image as well as the physical disability and focus on practical ways of coping with everyday life. Judicious use of success and frustration during rehabilitation is important in achieving positive motivation. Physical ability is important in achieving positive motivation. Physical disability can mobilize underlying inferiority feelings as well as bringing out dependency problems.

Dow (1962) hypothesized that there would be a difference between social class and reaction to physical disability. Because of the
greater emphasis placed on physical ability by the lower class, Dow hypothesized that the lower class would react more severely to physical impairment than would the middle class. The results showed the majority of parents were quite optimistic about the problem on the behavioral level. However, some families were able to cope more effectively than others, larger families managing a more balanced adjustment than smaller families. Lastly, most families attached little significance to physique and this seemed to facilitate their optimism in the face of disability. Overall, this study showed that there was no significant class bias in reaction to physical disability. This study seems to be in agreement with Schoggen (1964), who used trained observers to observe the physically handicapped child in his home as he interacted with his parents and his siblings. Although this study was done on a very small scale, it did indicate that the parents made little or no difference in the acceptance and treatment of the physically handicapped child as compared to their physically normal children.

Using the Draw-A-Person Test to differentiate between crippled and non-crippled children, Wysocki et al. (1965) compared the performance of 50 crippled and 50 non-crippled children on Machover's Draw-A-Person Test. This test confirms the assumptions that:

1. Crippled children tend to express more aggression in their drawings than non-crippled children.

2. Among the crippled children, the intensity of aggression differs according to different areas of insult, and

3. Among crippled children the area of insult is indicated in some way; thus the DAP seems useful
Another study with physically disabled children was conducted on 15 cerebral palsied boys by Gunn (1965) to study personality structure. His study utilized two control groups: one group was composed of 15 male congenital heart victims and the other group was composed of 15 physically normal boys. This study would indicate that handicapped children are emotionally and socially immature. Although more research is needed, Gunn holds the thesis that much immaturity may be related to the parents' treatment of the cerebral palsied child.

Although no clear-cut conclusions emerge from the various studies which have been reviewed, to some extent this is likely to be due to the complexity of the problem itself. Even with the so called "normal children" there is little comparative conclusive research. As has been stated previously, research on the personality of the handicapped is further complicated by the use of imperfect and limited instruments which have been designed for studying the personality of the nonhandicapped. In using them thus we assume that these are equally suitable for the disabled. As is true in all research, different investigators have employed different research designs, studied a wide range of ages and handicaps, and made use of a wide range of different tests and measures, so that it is difficult to compare results.

While most comparative studies show the handicapped child to be less mature and more disturbed than those without any disabilities, the present consensus of opinion seems fairly heavily balanced against the view that the handicapped are inevitably maladjusted. The physique
is only one factor in the extensive context of environmental and personal conditions acting together (Barker et al, 1953). In a review of the literature from 1928 to 1962 on the physically handicapped, Pringle (1964) failed to locate a definite association between a particular disability and a particular behavior characteristic.

Sociometric Instruments

Sociometric tests, used frequently for peer ratings, have been defined by Gronlund (1959) as "a method of evaluating the feelings of the group members towards each other with respect to a common criterion" (p. 3). Children's choices, Gronlund suggested, are affected both by other children's personal attributes and by contributions the latter make to the group. Children generally choose children similar in ability to themselves and of the same sex.

The social structure of groups can be described and evaluated by general observational procedures. However, it is often convenient to use the verbal response of the children themselves to make inferences about the structure of the groups in which they hold membership. Sociometric instruments are convenient and useful for a number of reasons. They provide data that have been shown to be related to several other important dimensions of group processes, such as morale, group effectiveness, and patterns of communication. They tap a residue of social relations that are usually difficult to sample in direct observation of social behavior. They provide reasonably reliable measures of what has been shown to be a fairly stable component of human-response tendencies.
They can be employed in comparable form over a wide age-range of subjects; hence, they have been useful in describing developmental trends in social relations (Thompson and Horrocks, 1947; Horrocks and Bicher, 1951).

The partial-rank-order procedure proposed by Moreno (1951) is simple and flexible. It consists of a desired number of questions such as the following: "Whom would you most like to have sit next to you in the classroom?" or "Who is your best friend?" Other questions would be similar for other situations. The subject answers the foregoing questions by indicating his first, second, and third choice, etc. The obtained data are usually tabulated in a sociogram. Lippitt and Associates (1952) have used photographs to help subjects identify other members of their group, and McCandless and Marshall (1957) have also used photographs to help offset the out-of-sight, out-of-mind tendencies among younger age subjects. The partial-rank-order approach to the measurement of group structure has the advantage of simplicity in both data procurement and analysis. However, its simplicity makes it vulnerable to a large number of deficiencies. The reliability and stability of some of the obtained social relations indices are reasonably high, but the stability of the individual nomination is highly variable (Witryol and Thompson, 1953).

The "guess who" approach has been used at least since the time of Hartshorne and Mays' (1929) early investigation of character development. Hartshorne and Mays' ingenious strategy was to present statements to the child in the form of word-pictures and require him to
guess from among his classmates the person or persons described. For each of the several traits there were sets of positive and negative statements. A child's reputation on the rating question was the difference between the total number of positive and negative nominations received from his classmates.

Reliability of Sociometric Tests

The degree to which consistency of response in sociometric testing is desirable is determined to a large extent by the use to be made of the results. If the results are to be used solely for organizing temporary classroom groups, the consistency of the results is not an important consideration. The class members choose associates for some activity, the groups are formed on the basis of their choices, and the sociometric test has served its purpose. What their choices would be like three months later, or for some other activity, is of no concern to the purpose for which the test was used. Since sociometric results have been frequently limited to this use, the importance of reliability has been deemphasized. For such limited use of the results, of course, consistency is not an important factor. However, for other uses of the sociometric data, and even for the organization of more permanent groups, consistency of sociometric results is of special concern.

Internal Consistency of Sociometric Results

The split-half method, used to determine the internal consistency of sociometric data, has been applied in a relatively small
number of sociometric studies. The usual procedure is to divide the
group into two arbitrary halves and then to calculate the degree to
which the sociometric status of individuals is comparable from one half
of the group to the other. The several studies in this area have
reported rather high coefficients of internal consistency. At the
sixth-grade level, Grossman and Wrighter (1948) reported coefficients
of internal consistency ranging from .93 to .97 for a variety of socio-
metric criteria, with three choices allotted to each one. Although
only four sixth-grade classes were used in this study, similar corre-
lation coefficients have been found by other investigators. Both Bass
and White (1950) and Ricciuti and French (1951) reported correlation
coefficients of .90 at the college level. Probably the most extensive
use of the split-half method was by Ausubel, Schiff, and Gasser (1952).
They determined the internal consistency of sociometric ratings at the
third-, fifth-, seventh-, eleventh-, and twelfth-grade levels. The
resulting correlation coefficients ranged from .54 to .86 for the
elementary and junior high school pupils and between .89 and .90 for
the two high school groups.

Although the above studies indicate a relatively high degree of
internal consistency in sociometric responses, the practical implica-
tions of these results are rather limited. The split-half method mere-
ly indicates how consistently an individual is chosen by different
members of a particular group. Although this indicates the possible
presence of a general social acceptability factor in the choosing, this
method of determining reliability has no special significance for
studying the status, structure, or development of groups. The stability of sociometric results over a period of time or from one situation to another cannot be assumed from measures of internal consistency. Thus, the restricted interpretations than can be made from coefficients of internal consistency in sociometric testing make them of little value as a general measure of the reliability of sociometric responses.

Stability of Sociometric Results

The most frequently used method of determining the reliability of sociometric results is that of the test-retest method. Time intervals between the two administrations of the test have varied from one day to several years. Although a number of variables have been shown to influence the results, a significant degree of stability of sociometric responses has been reported in these investigations.

The stability of sociometric status has been shown to vary from one age level to another. In general, the stability of the results is lowest at the nursery school and kindergarten levels and increases with the age of the subjects. The exact increase from one level to another is difficult to determine, however, owing to variations in the studies conducted at the various age levels. Variations in the time span between tests, the criteria used, the number of choices allotted, the length of acquaintance of the subjects, and similar factors, tend to confuse the results. Despite these variations, however, a significant degree of stability is reported in all studies, and a trend toward increased stability among older age groups can be detected, as shown
by the following studies for various age groups.

**Nursery School and Kindergarten Levels**

There are relatively few studies concerned with the stability of sociometric status at this age level. A study under the direction of Northway (1943) reported test-retest stability coefficients for a group of thirty-six children in a nursery school. Allotting three sociometric choices for three different classroom activities, correlation coefficients of .63 and .56 were obtained over a one-month and a three-month period. Bronfenbrenner (1945) made a similar study of fourteen nursery school children and reported a stability coefficient of .27 over a seven-month period. Although less stability is to be expected over a longer period of time between test and retest, the relatively small number of subjects studied by Bronfenbrenner in all probability depressed the correlation coefficient obtained. In the same study he reported a coefficient of .67 for the stability of the sociometric status of twenty kindergarten pupils over a seven-month period. At both levels he used three choices for each of three sociometric criteria (work, play, seating).

It is apparent from these few studies that even among young children the sociometric status of individuals is fairly stable over a period of months. Those that are highly chosen by the group tend to remain highly chosen and those with low group-acceptance tend to remain in that category. Knowledge of the variability of the behavior of young children makes these reports of the stability of sociometric status all
Elementary School Level

The stability of sociometric results has received the greatest attention at the elementary school level. Studies have reported on the relative stability of sociometric status over a period of weeks, months, and years. Stability at various grade levels had been considered, and a few studies have been concerned with the stability of sociometric results in a camp setting. Even the stability of sociometric results among retarded children has been given some attention.

Two studies reported on the stability of sociometric status over one-week, four-week and five-week intervals, at the sixth-grade level. In both studies three choices each were allotted to four criteria pertaining to in-school and out-of-school activities. The composite sociometric status scores yielded stability coefficients ranging from .60 to .90 in one of the studies (Witrgot and Thompson, 1953) and from .85 to .92 in the other (Thompson and Powell, 1951). Both investigations included four sixth-grade classes. The largest correlation coefficients were obtained over the one-week interval and the smallest over the five-week interval.

Similar results were found by Hunt and Solomon (1942) in a summer camp for boys. Using a one-limit choice for best-liked camper, they obtained correlation coefficients ranging from .70 to .95 for a one-week interval. Stability coefficients for a two-week interval ranged from .42 to .84. There were twenty-three boys aged five to eight years.
participating in the choosing. Another study in a camp setting reported an average correlation coefficient of .77 for choice of tent-mates over a one-week interval (Newstetter, Feldstein, and Newcomb, 1938). In this latter study five choices were allotted, and the subjects were thirty boys ranging in age from ten to thirteen years.

Although there is a tendency for sociometric status to be more stable over shorter periods of time and among older age groups, the degree of stability at lower grade levels and over relatively long periods of time is sufficient to warrant the use of sociometric testing in elementary classrooms at all grade levels. The greater variability at the lower grade levels, however, should alert teachers to the need for more frequent testing at these levels.

**Secondary School Level**

Although relatively few studies of the stability of sociometric status were conducted with high school classes, the stability coefficients reported tend to be as high as, or higher than, those reported for the elementary school level. Studies among adolescents in out-of-school groups also tend to support the findings of studies conducted in school settings.

Northway (1947) reported coefficients of stability of .90 over a one-week interval and .60 over a one-year interval for high school groups in Toronto. However, she did not indicate the nature of the choosing situation nor the size of the group tested. Bretsch (1948) studied the stability of sociometric status among 150 ninth-grade
pupils. Using two choices for each of six criteria he correlated the composite social acceptance score over a two-week interval. The resulting co-efficients were .83 for boys and .76 for girls. Similar results were reported by Damrin (1949) for 156 girls in grades nine through twelve. Using a composite score based on five criteria and three choices, a correlation coefficient of .86 was obtained over an eight-week interval between tests.

One of the original studies of the stability of sociometric status among adolescents was conducted by Jennings (1950). Her study included 133 girls, ranging in age from twelve to sixteen years, who were residents in a New York training school. The girls were requested to choose those fellow residents they most preferred as work mates and roommates and those they least preferred for the same criteria. An unlimited number of choices was permitted. Correlation coefficients of .96 for positive choices and .93 for negative choices were obtained for a retest four days later. Coefficients of stability for an eight-month interval were .65 for positive choices and .66 for negative choices. Since this is one of the few studies reporting on the stability of negative choices, it is interesting to note that rejection status is as stable as acceptance status over varying periods of time. The tendency for the stability of sociometric status to decrease as the time between test and retest increases is clearly evident in Jennings' results. However, even after a period of eight months, a relatively high degree of stability is indicated.
Validity of Sociometric Results

An evaluation of the validity of sociometric results is an extremely complex process. This is partly due to the fact that the traditional concept of validity is difficult to apply to sociometric testing. Traditionally, the validity of a measuring instrument refers to the degree to which it measures what it is supposed to measure. When this concept of validity is applied to intelligence and achievement testing, the characteristics to be measured can be explicitly defined and, at least generally, agreed upon. However, in the area of sociometric testing there is little agreement as to what the sociometric technique is supposed to measure. Some sociometrists hold the viewpoint that the sociometric test is supposed to measure choice behavior and, therefore, is valid by definition (Jennings, 1950; Pepinsky, 1949). This concept of validity implies that the proper construction and administration of the sociometric test will assure valid responses and that further validation of the results is unnecessary. Although such a limited concept simplifies the problem of determining validity, it also restricts the interpretation of the results.

In contrast to this limited interpretation of validity, other investigators have evaluated the validity of sociometric results by relating them to a host of psychological and sociological variables (Lindsey and Borgatta, 1954; Mouton, Blake, and Fruchter, 1955). This concept of validity implies that the sociometric test should measure meaningful variables of psychological and sociological interest. Which
variables should be related to sociometric results, however, has not been clearly determined. Therefore, any evaluation of the validity of sociometric results must be more or less arbitrarily restricted to those variables which appear to have some logical relevance. A common method of testing the validity of sociometric tests has been to compare these with ratings on the actual behavior of the students by peer groups and teachers.

Sociometric Results and Observations of Behavior

A number of studies have been concerned with the relationship between the results of sociometric choosing and observations of the actual behavior of group members. Behavior observations were generally controlled and based on samples of behavior obtained at various times. Although the majority of these studies were conducted among elementary school children, a few of them were concerned with older age groups.

Biehler (1954) conducted a unique study at the kindergarten level. The twenty-five children participating in this study indicated their preferences for play companions by selecting pictures of their friends' heads and placing them on stick men organized into play groups of five, three, and two. Each child was instructed to place his own picture on one of the stick men first, and then to place the pictures of the other children who should be in the play groups on the remaining stick men. Variations in the size of the groups of stick men, of course, enabled the investigator to determine the degree of preference toward selected play companions. Observations made during two play
sessions were used to identify the most frequent play companions of each child in actual play situations. A comparison of the sociometric choices with the behavior observations indicated close agreement for the children's first choice. Between 72 per cent and 76 per cent (for the two sessions) of the children's chosen play companions were the same as their actual play companions, when only the first choice was considered. Lower levels of choice revealed no clear relationships. These findings are in harmony with the fact that children at this age level make little discrimination beyond the first choice.

In studies at the first- and second-grade level, Bonney and Powell (1955, 1953) systematically observed the behavior of children with high and low sociometric status. In both studies, the original subjects included five classrooms of pupils. Sociometric status was determined by using an unlimited number of choices for work companion and play companion. Pupils whose sociometric status was in the top fourth of the group on both criteria were placed in the high status group. Those in the lowest fourth of the group on both criteria were placed in the low status group. Each child in the high and low status groups was observed between eighteen and twenty times, for periods ranging from five to ten minutes. These behavior samples were systematically obtained by time-sampling methods. At the first-grade level, observations were obtained in both play and classroom situations. However, at the second-grade level observations were restricted to free play situations. At both grade levels, twenty-five different behavior categories were used to aid in the observations. These categories
were limited to elements of social behavior that could be objectively observed. The purpose of both studies was to determine how the social behavior of sociometrically high and sociometrically low children differed.

At the first-grade level there was a significant difference between children of high and low sociometric status in five areas of social behavior. Those children with high sociometric status more frequently conformed to classroom requirements, smiled more often, participated more frequently in cooperative group activity, made more voluntary contributions to the groups, and associated with more children during free play and activity periods. In general, these findings indicate that the highly chosen children were more active and flexible in their social relations than were those children with low sociometric status.

Similar results were reported for the second-grade level, although specific social behaviors varied, due to the restriction of observations to free play situations. Children with high sociometric status were observed to talk more frequently, to laugh and giggle more, to participate more frequently in cooperative group activity, and to play with other children more frequently. Thus, as with the first-grade children, those pupils with high sociometric status tended to be more socially active and to have more social relations with a larger number of children than those pupils with low sociometric status.

In a fourth-grade classroom, Byrd (1951) structured a situation so that he could directly relate sociometric choices to "real life"
choices. He had twenty-seven pupils in a classroom write down the classmates they most preferred as fellow-actors in a classroom play. Over a two-month period, following the sociometric test, he had each pupil openly choose several classmates and put on an unrehearsed play. Following the "real life" choices, which were put into actual practice, he again administered the same sociometric test. The number of choices pupils received on each sociometric test was correlated with the number of choices they received for the actual play situation. Correlation coefficients of .76 and .80 were obtained, indicating a relatively high degree of relationship between sociometric choices and "real life" choices.

In general, and especially at the elementary school level, choice behavior has been shown to be significantly related to observed behavior (Gronlund, 1959, p. 163). Thus, sociometric preferences have shown considerable overlap with actual associations, and pupils with high sociometric status have been distinguished from those with low sociometric status by significant social behaviors. These findings, although based on a limited number of subjects, tend to indicate that sociometric results do have meaning in terms of actual behavior. However, the differences between sociometric results and observed behavior indicate that these two methods are evaluating different aspects of social behavior and cannot be directly equated. Although the evidence is meager, there is also some indication that the relationship between choice behavior and actual behavior may be lower among older age groups (Gronlund, 1959, p. 164).
Peer Reputation and Social Choice

The role of social interaction has been referred to many times throughout research on the development of the self. As the child grows older the peer group assumes greater importance in the development of the self-concept.

Sociometry deals with a very important aspect of personality: how the person affects others. William James (1890) once said that we have as many selves as there are people who recognize us (because our "self" is, in a large part, how we affect others).

Sociometry is a word coined by Moreno (1934), a psychiatrist much impressed by the importance of the individual's role among other people. Moreno's work with public school children's choice of classmates as desired friends showed that mutual attractions and rejections of other members of a social group could be plotted. Such a diagram is known as a sociogram and tells us something about the more popular and less popular group members.

The peer group helps the child develop a concept of himself. The ways in which peers react to a child and the basis upon which he is accepted or rejected give him a clearer and perhaps more realistic picture of his assets and liabilities.

White (1948) in discussing the importance of the peer group on the child goes on to say that:

"It is fair to say that the crucial arena for self-esteem is the arena of one's age mates. At home he must be "love-worthy"; this may include being competent but is heavily weighed on the side of being good, being
affectionate. On the playground the values are different; he must be "respect-worthy", able to command respect because he shows competence and handles himself with ease. It is a sharp strain for many children when they pass from the atmosphere of a child-centered home into the competitive realities of even a friendly play group. They must now show what they have in the way of physical prowess, courage, manipulative skills, out-going friendliness, all in direct comparison with other children of their age. The penalty for failure is humiliation, ridicule, rejection from the group" (p. 144-145).

The nature of children's groups varies somewhat with age. During the early years of middle childhood informal groups formed by the children themselves predominate and the school child is likely to refer to "the gang". The gang has few formal rules for governing itself, and there is a rapid turnover in membership. Expediency plays a large role in determining group membership. Factors such as social class, specialized interests and physical appearance play less of a part than they will in the future (Mussen, Conger and Kagan, 1963, p. 381). Later, however, between 10 and 14 years, the tendency is for children's groups to become more highly structured. Aspects of formal organization occur.

One of the more popular techniques for measuring social status of children is the sociometric approach in which the youngsters are asked to list their preferences and rejections among the other children with respect to some definite criteria, such as to name the three children he would like to have as teammates, as neighbors, etc. Bonney (1943) used the technique to differentiate socially successful and unsuccessful fourth-grade children in three schools on the basis of their classmates' response to a series of sociometric questions. Each
child received a composite social acceptance score. In this study classmates and teachers rated the 20 most popular (i.e. highest in social acceptance) and the 20 least popular children on a battery of 20 personality variables. Popular children were rated higher in socially aggressive and out-going characteristics. In general they manifested either of two personality syndromes. The first was composed of strong, positive, aggressive characteristics such as leadership, enthusiasm and active participation in recitations. The second, which was less definite, involved cheerful disposition and friendly attitudes (tidy, good-looking, frequent laughter, happy and friendly). By and large, the characteristics associated with popularity showed a great resemblance to those which had been found to be the consequences of gratifying and rewarding early interaction in the family setting.

Personality variables related to popularity have also been investigated by analyzing responses of a large number of first-, third-, and fifth-grade boys and girls to the reputation test (Tuddenham, 1951). In this test, the subject lists the children in his class who "have many friends", are "good sports", "good-looking", etc. Popularity scores, the number of votes received on "has many friends" and "not many friends" were then correlated with scores on all other personality variables. Data were analyzed separately for boys and girls in each grade.

Popular children in most groups were considered good-looking, friendly, good sports and best friend. The relationships of other attributes to popularity varied with sex and age. For example, among
first-grade girls popularity was closely associated with the characteristics of "acting like a little lady", "being quiet", "not quarrelsome" and "not bossy". The importance of "acting like a little lady" declined as girls grew older, till by the fifth grade this trait had little to do with social prestige. At this age good looks, good sportsmanship, friendliness, tidiness and lack of quarrelsomeness was highly correlated with girls' popularity.

The most highly esteemed first-grade boys were those whom their peers considered good sports, good at games, not bashful and daring and "real boys". Fairness in play and leadership ability were the most important correlates of popularity among third-grade boys. Fifth-grade boys received many votes as best friends, good-looking, not bashful and "real boy". In this group friendliness, good sportsmanship, and tidiness were somewhat less closely linked to popularity; characteristics such as "not bossy", "doesn't get mad", "not quarrelsome", and "doesn't fight" had little to do with prestige positions.

It may be concluded that the responses and characteristics most likely to be associated with social acceptance varied by age and sex. From this it may be inferred that high prestige with peers is at least partially a product of adequate sex typing.

Studies on social class and peer group status show these to be related. In one study of 63 children in two school classes, social acceptance was found to be highly related to objective measures of family socio-economic status (Bonney, 1944). The child's social class background was apparently of major importance in determining his social
prestige among peers.

Other findings from sociometric studies indicate that lower class children are more likely to have poor reputations among their peers, of all social classes, including their own. They are likely to have few friends and are generally considered poorly dressed, plain-looking, unpopular, aggressive, not liking school, dirty, bad-mannered, unhappy and unfair in play (Bonney, 1943). Mussen, Conger and Kagan (1963) have speculated from this study that economic factors may partially account for the relatively low social standing of lower class children. Poverty may mean poor health, poor clothes, and little participation in social activity. Any of these factors may reduce a child's opportunities to establish stable peer relationships and may thus handicap him in learning good social techniques. Moreover, the child's awareness of his lack of social knowledge may produce feelings of inferiority and inadequacy and hence withdrawal from social interactions.

The specific behavior associated with social status and popularity varies from class to class, because the "ego ideals" for boys and girls differ among classes. One investigator (Pope, 1953) compared boys and girls from lower and middle class families with respect to the clusters of traits they would regard as necessary for a good reputation. The lower class boys respected two masculine types. The first was the aggressive, belligerent youngster who had earned the respect of his peers because he was tough and strong. The second included boys who were out-going and sociable but not overly aggressive. The personality pattern that led to rejection was that of the "sissy" who conformed to
the teacher's requests and obtained good grades. The lower class boy who does well in school makes himself vulnerable to alienation from his peers and hence he may be in a conflict over wanting to be accepted by his peers and doing well in school.

Lower class girls were willing to accept the rowdy, verbally aggressive girl who showed a strong interest in boys. However, in contrast to boys, they also respected the friendly, pretty, neat and studious girl who was not necessarily a leader nor overly interested in the opposite sex. Thus a lower class girl can be a good student without alienating her friends. Middle class boys accepted boys who were skilled and competitive in games but who were neither overly bossy nor blatantly aggressive. Friendly, handsome and popular boys were also admired, as were good students. As in the lower class, the effeminate and frightened middle class boy was rejected by his peers. There was only one acceptable stereotype of middle class girls - that of the pretty, friendly and vivacious girl. Girls in this class rejected the aggressive, rowdy and sexually forward girl that some lower class girls admired. Although there were some class differences, the boys in both social classes rejected the "sissy" and the girls in both classes valued beauty, neatness and sociability.

More recent studies on the sociometric status of children have been conducted on different aspects. For example, Alexander (1966) in investigating the relation between birth order and sociometric status obtained data on 1410 male seniors in 30 high schools. First-born children were found to receive more sociometric choices and have more
reciprocate choices than later-borns. First-borns tend to choose relatively less popular persons as friends than do later-borns.

Silverman (1964) based his study on the relationship between self-esteem and aggression in two social classes. The social class is based on the father's occupation. In an attempt to explore the component parts of aggression, instruments were constructed which sought to assess verbal, direct, physical and indirect aggression. Ratings were made by teachers, classmates and the subjects themselves. The results showed that in both social classes the teachers and classmates were in closer agreement than were either of them with the subject's self-description. There was a negative correlation between self-esteem and aggression in the middle class and no significant relation between these variables in the lower class. There was no difference found in self-esteem between lower and middle class subjects. The evidence on the relationship between social class and amount of aggression was inconclusive.

In her doctoral thesis, Wing (1966) studied children whose reported self-concept differed from classmates' evaluation of them. This study was conducted on 510 subjects in classroom groups of fifth-graders who responded to the Piers-Harris items and "guess who" tests, while their teachers completed rating scales. Peer ratings identified children perceived as extreme on each of five scales - appearance, behavior, ability, popularity and acceptance of others. The statements used in the self-concept tests were those developed by Piers and Harris (1964). Children seen as low in ability were also likely to be seen as
unattractive or unpopular, lending support for a cause-effect relationship. Similarity between self-evaluation and peers' evaluation also suggested a cause-effect relationship, but offered no proof of direction of effect.

In the discrepant group of 30 children who were rated negatively by their peers, but who rated themselves highly, were many youngest children. Members of this group tended to have below average tested mental ability. Peers rated boys as misbehaving, girls as not accepting of others. The 19 underrated children were characterized by average or above average mental ability. Their perceptions of others typically agreed with those of their classmates. In rating themselves these children often indicated qualifications rather than a simple yes or no response.

The boys and girls who rated themselves positively but who were negatively rated by their peers appeared to be outstanding for both low achievement and (for boys) misbehavior. Either or both of these were suggested as causal factors for low peer ratings, as well as results of peers' negative attitudes toward and treatment of these children.

On the basis of interactionists and reference groups theories, Mannheim (1966) examined the agreement between the changes in aspects of the self-image, using 103 male freshmen at the University of Illinois as subjects. These men were living together in several University housing barracks. Due to the physical set-up of the barracks, the residents knew each other well and interacted closely, both physically and socially. The results of the test showed that individuals tended to
change their self-image over time in the direction represented by their reference group self. Two testing sessions were conducted: the first took place in the third week of the first semester and the second was held nine weeks later. The subjects were given a reference group questionnaire which asked them to list "The group whose opinion about your personality and character matter most to you". A comparison indicated that 89 per cent of the respondents listed the same groups on both schedules; thus, groups to which a subject wanted to be acceptable were in fact groups whose judgment about "self" mattered most to the subject. In a description of the self-instrument, four different self-descriptions were obtained by Mannheim as follows:

1. Self-image - Describe yourself as you ordinarily think about yourself;

2. Ideal-self - Describe yourself as you would most like to be;

3. Reference Group Looking-Glass Self - inferred from the responses when the subjects were instructed to describe themselves as they thought the people in the groups which they had named as most important to them would describe them;

4. Membership Group Looking-Glass Self - Describe yourself as others in the building probably see you (p. 271).

Mannheim adds a note of caution to this study, saying that since it consisted of university students, it would not be possible to generalize these results beyond the group tested.

A new approach to the study of social reputation and social behavior was conducted by Winder and Wiggins (1961) by the use of a peer
nomination inventory, which is a modified "guess who" procedure designed for use in the assessment of several aspects of social reputation within the peer group of pre-adolescent boys. Each subject received a score on each of five reputation scales: aggression, dependency, withdrawal, depression and likeability. This study was mainly to test the validity of this instrument and positive findings were reported with respect to concurrent validity. These same authors then conducted another study (1964) to further validate this instrument. This latter study was done on 225 fifth- and sixth-grade boys to study the congruence of reputation with behavior. Findings support the conclusion that reputation is predictive of overt interpersonal behavior. A tentative conclusion from this study is that overt dependency and overt aggression are less closely related than are the aspects of reputation.

One of the few studies done on peer acceptance and the physically handicapped child was conducted by Force (1956). He used an instrument which he described as "a near sociometric" instrument with elementary school children, in which physically handicapped children were integrated into classes of physically normal children. The physically handicapped children were significantly underchosen as friends in four classes, as playmates in seven classes and as workmates in seven classes. Those among the handicapped who were chosen by the nonhandicapped tended to be those with disabilities less obvious to their peers. Force concluded that a physical handicap which is readily perceptible to other children can serve as a significant social impediment for the possessor.
CHAPTER III

METHODOLOGY

The purpose of this research is to obtain more information on the physically handicapped child's view of himself and his reputation in the peer group. As indicated earlier, the present study differs from previous research on the self-concept and peer reputation, as the majority of studies have dealt mainly with physically normal children or adolescents.

In order to obtain the data for this study, three sets of instruments were used; the self-concept scale was that used by Lipsett (1958) and the peer reputation scale was that used by Winder and Wiggins (1961). The children were also rated by their teacher and their physical therapist on their ability to communicate, restriction of locomotion, and severity of disability. This rating scale was devised by the author.

This chapter also describes the selection of the population, the selection of the sample and the administration of the rating instrument, and plan of analysis.

Selection of the Population

Physically handicapped children who were attending special schools were selected for this population because a review of the literature has not revealed any similar studies done on the handicapped
child in a classroom setting where his peers were similarly disabled.

A survey of Oregon revealed that two schools provided special classes for physically handicapped children. These were the Holladay School in Portland and the Children's Hospital School in Eugene. It was at these two locations that this study was conducted. The Holladay School in Portland provides special classes for physically handicapped children and is part of the regular elementary school system. This differed somewhat from the Children's Hospital School in Eugene, which serves only physically handicapped children. When this study was begun, however, the Director was in the process of initiating a special class for mentally retarded children. In both situations the physical therapists worked extensively with the children.

Selection of the Sample

A discussion with the teachers as to the ability of the children at these schools revealed that the younger ones were not physically capable of responding to the selected tests because they had not received enough treatment and therapy to react independently. As a result, this study was limited, at the teacher's and director's request, to the entire population of the children in the intermediate and upper classes of the physically handicapped children at Holladay Center in Portland and the Children's Hospital School in Eugene. The age of the children at Holladay Center in Portland ranged from 10 to 16 and they were divided into two classes. This same age range at the
Children's Hospital School in Eugene was grouped into one class.

The intermediate class at Holladay Center in Portland ranged in age from 10 to 12 years, and contained nine boys and four girls. The upper class at this school had an age range of 11 to 16 years, totalling 11 children, seven of whom were boys and four were girls. The group at the Children's Hospital School in Eugene ranged from 10 to 16 years of age but only had seven children and was quite evenly divided in sex as there were four boys and three girls.

During the time of testing it was only possible to obtain complete scores on 28 children instead of 31. One girl from the intermediate class was hospitalized and one girl from the Children's Hospital School moved, and one girl in the upper class at Portland was blind, so was not included in this study.

The children in this study were all affected with neuro-muscular difficulties and/or orthopedic disabilities. A severe form of cerebral palsy was the most common form of disorder, with spina bifida, post polio conditions and osteogenesis imperfecta also presenting serious impairment. Included in the group were victims of auto accidents.

Testing Problems with the Physically Handicapped

Children who have neuro-muscular involvements present difficult assessment problems. The picture is considerably more complicated with respect to those handicapped by cerebral palsy. The subjects used in this study were, for the majority, victims of cerebral palsy.
These children are unable to complete the usual form of tests because of physical limitations. A review of the literature shows that great liberties in endeavoring to "adapt" individual examinations have been taken with respect to the cerebral palsied. The greater the physical involvements of such children, the greater has been the need either to make such "adaptations" or to develop examination procedures appropriate to the demands of this type of exceptionality. In fact, with the absence of individual devices suitable for use with the cerebral palsied, a "cafeteria" approach generally has been used (Newland 1952). Depending upon the condition of the particular child, certain items from one scale are used in connection with other items lifted from other scales on the assumption that all such items, taken together, psychologically rather than additively, would give at least a general idea of the picture of how the child is functioning, or could function.

The problem in testing children with neuromuscular involvements is not so great with those who are only mildly involved, since with moderate caution, available approaches can be used. The major difficulties exist with respect to the examination of those of moderate and severe neuromuscular involvements. In such cases, communication is a problem, both regarding the use of verbal responses by the subjects and, in some cases, regarding the sensory impairments of such cerebral palsied children. In some instances, these children are physically unable to speak and have difficulty in pointing. In addition to the problem of communication, there are those of the meaninglessness of
rigid time limits, the wide age range, the possible relatively higher fatigability as compared with nonhandicapped, the possible interference of more and greater emotional factors such as excessive dependence.

Selection of Instruments

Because the subjects in this study were severely handicapped children and would have difficulty in speaking and writing, the tests chosen for the purposes of measurement had to require a minimum of writing and speaking. The tests also had to meet a minimum of administration time in order to be acceptable to the school directors and the teachers. With these factors in mind, a diligent search was made of the literature to find instruments which would fall into this category and which also had established validity and reliability, a factor which, according to Wylie (1967) has frequently been overlooked by authors producing similar tests. Two instruments, which seemed to meet these factors, were identified and were used in this study. The rating scales for the self-concept will be measured by an instrument developed by Lipsett (1958) in his study of the relationship between children's self-concept and scores on the children's form of the Manifest Anxiety Scale. It consists of 22 trait descriptive adjectives. Each adjective is rated by the subject on a five point continuum ranging from "not at all" to "all of the time". A copy of this test has been included as Appendix A.

The instrument to be used in measuring peer reputation is the one designed by Winder and Wiggins (1961), which is an empirically
derived sociometric test of adjustment. In an attempt to overcome the problems of social popularity and sociometric measurements (Gronlund, 1959), the Winder and Wiggins Peer Nomination Inventory requires that specific traits be evaluated. It consists of 59 statements, for example, "He will always play by himself", or "He is always acting up." The children were asked to check the students in their class who do these things. The class lists were obtained and the students' names were printed in columns across the top of the page to facilitate the recall of classmates. The qualifying statements as to behavior were printed down the left-hand side of the page. A sample of this test as used in this study has been included as Appendix B.

Because it was hypothesized that a child's ability to communicate, as well as his physical disability, would affect both his self-concept and peer reputation, a rating scale was devised by the author to measure these traits. Each of the three descriptions of ability to communicate, locomotion, and general ability were on a five-point continuum, ranging from no difficulty at all to more severe situations. A rating was obtained from the student's teacher and from his physical therapist. These ratings were obtained independently so that neither the teacher nor the physical therapist knew how the other had rated the child. This rating scale is described in Appendix C.

**Items Used in the Self-Concept Scale**

Items used in the Self-Concept Scale are those employed by Lipsett (1958) in his investigation of approximately 300 fourth-, fifth-
and sixth-grade children, in which he compared the child's self-concept and anxiety level, using the Children's Manifest Anxiety Scale for this latter measurement. The distribution of scores on his Self-Concept Scale was essentially normal.

Reliability and Validity of Instruments

Reliability of the Self-Concept Scale

Lipsett used a two-week period test-retest to determine the reliability of the self-concept instrument and found the correlations for the various grades and sex to be significant beyond the .001 level, ranging from .73 to .91.

Validity of the Self-Concept Scale

The test appears to have face validity and in addition, some construct validity, for Lipsett found significant correlations for all grade and sex combinations between the CMAS (Children's form of Manifest Anxiety Scale) and the self-concept scores. The correlations ranged from -.53 to -.61 at the .01 level.

Validity of the Physical Rating Form

The high degree of correspondence between teacher and physical therapist ratings on the disability rating forms was considered an index of concurrent validity. The correlation, using Pearson product-moment treatment, between these ratings was: communication, $r = .9331$;
locomotion, \( r = 0.8346 \); general ability, \( r = 0.7016 \); and total rating score, \( r = 0.8202 \).

**Reliability of Sociometric Tests**

The peer nomination instrument used in this study was the one devised by Wiggins and Winder (1961). The statements used on this test were translated directly to items and for the most part, were verbatim quotes from children. To acquire the items used in their final P.N.I. form, Wiggins and Winder used a sample of 25 eight- to twelve-year old boys, who were asked to describe the behavior of boys in their class who were not making adequate social adjustments. From these tape-recorded statements, the judges were asked to sort the 3,290 behavior statements into five categories (aggression, dependency, withdrawal, depression and other). Working definitions of these constructs were formulated and discussed with the judges. For purposes of sorting, each judge was provided with working definitions of these traits. All items were eliminated which did not meet the criterion of unanimous agreement among the independent sortings of the three judges. The judges agreed on 80 per cent of the category placement, and thereby eliminated 20 per cent of the items from the total pool. It was not feasible to administer 216 items of this type to a single subject of elementary school age. To cut down on this number, the administration sample design was one in which the total pool of 216 items was randomly assigned to six different forms, each containing ten aggression, ten dependency, ten withdrawal, and six depression items. The administration of each form was replicated six
times at different grade and socio-economic levels. The twelve best items from each of the variable categories for inclusion were chosen. The final form then had 48 scorables items on the four negative scales.

The reliability of the scale was tested by an internal-consistency method. The internal consistency of each of the scales was estimated by correlating the odd versus the even items for each scale. The high degree of internal consistency suggests that relatively homogeneous behavior dimensions are assessed by the variables scales. The degree of consistency ranges from a .875 correlation among items on the withdrawal scale to a .780 correlation among items on the depression scale.

The students were retested twelve months after the initial testing, but it was only possible to retest approximately 48 per cent of the original cases. It should be noted that the retested boys were not only in a different grade, but, in many cases, among different classmates as well. For the total groups, the test-retest coefficients were .519 for aggression, .437 for dependency, .5214 for withdrawal, and .370 for depression. Considering the developmental changes that might take place within a year at these age levels and the fact that the retest scores were often derived from different raters, the results (again, with the exception of the depression scale) are generally encouraging.

The correspondence between teacher and peer ratings on the total scale score was considered an an index of concurrent validity. The total scale score in each of the four variables for teacher and peer
ratings were correlated for each class. The highest agreement between teacher and peer ratings was found on dependency and withdrawal variables with medium RHO's of .64 and .63 respectively. Agreement was less close for aggression (medium RHO .54) and least close for the depression dimension, where the medium RHO was only .42.

Further validation of the Peer Nomination Inventory was attained by Winder and Wiggins (1964) with a study in which they compared the results of trained observers with the peer nomination scores. Observers recorded aggression and dependency respectively according to detailed checklists which had been pretested. In both situations, two observers were present regularly. An extra observer to provide for assessment of agreement between raters was present for 30 subjects in the aggression study and 33 subjects in the dependency study. The results indicated that the overall difference between means on observed aggression is significant at the .001 level, and that the observed P.N.I. dependency mean scores were significant at the five per cent level. These results are partial validation of the aggression and dependency scales of this Peer Nomination Inventory scale.

**Method of Procedure**

After Oregon had been surveyed in order to locate special classes for physically handicapped children, two schools were found. A letter explaining the purpose and nature of the study was written by the author and sent to the directors of these two schools, requesting an appointment to give further information and to describe the type of
tests which would be administered. A meeting was later held with the teachers to determine if they would be willing to cooperate. The teachers and the two directors were very cooperative and appointment times were set up to do the testing. Class lists were obtained at this time and also a description of the type of impairments found among the children of these schools. The directors requested that this testing be limited to those children in the older groups, from 10 to 16, because of the difficulty younger ones would have with the tests. It is also known that children in this age group (10 to 16) are old enough to have developed attitudes about themselves and others which they are able to verbalize. All of these children had been in school since the beginning of the term, which meant that they had been together for about eight months before this author began the testing. This was long enough for them to have formulated attitudes in relation to their academic performance, as well as to relationships with classmates.

The Lipsett Self-Concept Test was used in its entirety. However, the Winder and Wiggins test originally had listed 62 items. A discussion of this test with the teachers of the physically handicapped children indicated that they believed three of the items were not appropriate to physically handicapped children. Since these were only filler items, they were dropped. They were such items as "He can run very fast", "He has plenty of money", and "He's got a real nice bike."

The author administered the test to the students individually. Each item was read aloud to the student and a brief period was allowed for the student to make a decision and to ask questions for
clarification. It was expected that this method would insure the subject's continuous involvement. Before giving the instruction for the test, the examiner (the writer) briefly described that this study was being conducted in this area to learn how children of this age feel about themselves and what children of this age do. She stressed the fact that individual responses would be kept confidential and encouraged questions by the children. The details of administration procedure for both tests are described in the Appendices. The "self-concept" test was administered first to each child as it was simpler and would help to gain the child's cooperation. After finishing this, the examiner allowed time for the child's questions and comments. Then the Peer Nomination Inventory instrument was administered. The examiner read the question and also would read the names of the children in each class, to help facilitate memory in the selection of children for these items (some of the children read very poorly). Again, the student was told that these tests were being given to school children to learn what they think about themselves and about their classmates and that the results would be kept in confidence. For each item the children were told that they could name as many children in the classroom as fitted the description.

After the testing of the children was completed, the authors gave the teachers and the physical therapists the rating forms to complete, with instructions for them to select only one item in each category. These two ratings on each child were then combined to give an average rating for the child.
On the self-concept scale, the children were instructed to make just one "X" after each statement. It was stressed that there was no right or wrong answer and that they were to choose the rating for each statement which they thought described them the most accurately. The author found that there were approximately six words which needed to be explained for the children so that they would all have the same meaning for each child. These words were: "obedient", "proud", "loyal", "thoughtful" and "courteous". In each instance the author gave exactly the same description so that there would be a uniform understanding about the meanings of these words.

The Peer Nomination Inventory was composed of five variable scales. These were: aggression, dependency, withdrawal, depression, and likeability. The first four had 12 statements each which could be classified as falling into that particular characteristic. The likeability scale, on the other hand, only had eight items which could be rated as positive. There were three filler items, making a total of 59 items. Instructions were stressed to make a decision, if at all possible, for each statement.

Ratings by teachers and physical therapists were combined and averaged. If a child received an average score of one or two on his ability to communicate, to walk, or to care for himself, his disability was cited as being moderate; a rating of four or five signified a severe restriction in these areas.

The selection of behavior descriptions by peers was tabulated and the raw scores compared to select that area of behavior which was
most highly represented by student choices for a particular student. Thus, the high score was selected as indicating a student's major characteristic as seen by his classmates. The total number of selections was also recorded to indicate the child's impact on the group. The inconspicuous children were those receiving few nominations, either positive or negative.

Treatment of the Data

Although the number of subjects employed in the present study was small, there were 13 variables identified and analyzed. These included the subjects' age, ability to communicate, restriction of locomotion, and general disability. In addition a self-concept score was tabulated along with Peer Nomination scales on aggression, dependency, withdrawal, depression, and likeability. A study was also made of the number of responses, both negative and positive, on each child, to attempt to study the variables relating to a child being inconspicuous to his classmates.

These 13 variables were punched into IBM cards in a format suitable for analysis by the IBM 1620 Digital Computer housed in the Computer section at the University of Oregon.

The first analysis to be carried out was an inter-correlation of the variables, using the Pearson product moment correlation. Three groups were combined for this analysis because no significant difference at the .05 per cent level existed between these groups for degree of physical impairment as measured by Tukey's Test (1959).
The following five hypotheses were based on the theoretical implications of physical disability on self-concept distortion:

1. There will be a negative relationship between the self-concept score and the severity of the physical handicap.

2. There will be a negative relationship between self-concept and age in the physically handicapped child.

3. There will be a positive relationship between self-concept score and likeability score on peer rating.

4. There will be a positive relationship between severity of physical handicap and total negative peer rating score.

5. There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by total selection score.

To be significant at the .01 per cent level of confidence, the $r$ values at 26 degrees of freedom must be equal to or greater than .478, and at the .05 per cent level of confidence, $r$ must be equal to or greater than .374.
CHAPTER IV

FINDINGS

Introduction

The results of the study described on the preceding pages are presented in this chapter. The first section entails a review of the questions raised earlier under "Purpose of the Study", and the citing of data which relate directly to these questions. Following this, the results of a correlational analysis of the variables are reported in tabular form. Detailed verbal descriptions of all aspects of each table are generally not provided. However, whenever feasible, the results cited here are compared with previous related research. Finally, there is a discussion of the implications of this study.

The general hypothesis of this study is that the limitations imposed by a physical disability will affect the child's view of himself as well as his peer reputation. The following five hypotheses relating to this theme were investigated:

1. There will be a negative relationship between the self-concept score and the severity of the physical handicap.
2. There will be a negative relationship between self-concept and age in the physically handicapped child.
3. There will be a positive relationship between self-concept score and likeability score on peer rating.
4. There will be a positive relationship between severity
of physical handicap and total negative peer rating scores.

5. There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by total selection score.

Before submitting the data to the IBM 1620 Digital Computer for multiple correlation analysis, the three small groups were examined for homogeneity in the belief that they could be combined to provide one sample with an N of 28 instead of N's of 9, 13 and 6. According to Garrett (1965) "we get a better estimate of the 'true' SD (σ in the population) by computing a single SD; furthermore, by increasing N we get a more stable SD based upon all our cases" (p. 224).

The test for significant difference as it related to the age and physical disability of the groups was conducted using the quick compact method designed by John Tukey (1959) to meet Duckworth's specifications, on the advice of the author's statistician.

Before presenting the results of this test of significant difference on the data, a brief description of this method as described by Tukey is given in the following paragraph:

"Given two groups of measurements, taken under conditions (treatments, etc.) A and B, we feel the more confident of our identification of the direction of difference the less the groups overlap one another. If one group contains the highest value and the other the lowest value, then we may choose (I) to count the number of values in the one group exceeding all those in the other, and (II) to count the number of values in the other group falling below all those in the one and (III) to sum these two counts. If the two groups are of roughly the same size, then the critical values of the total count are, roughly, 7, 10 and 13, i.e. 7 for a two-sided 5% level, 10 for a two-sided 1% level, and 13 for a two-sided 0.1% level" (p. 32).

Tukey goes on to say
"If the ratio of sizes n + N does not exceed 4:3, this procedure will be entirely satisfactory. We may extend its usefulness to pairs of samples of less well matched size, while preserving semi-portability, by subtracting an integer (the correction factor) from the total count before comparing with 7, 10 and 13.

"Without using the correction factor, this test is useful in indicating the weight of evidence roughly. For those who want a compact procedure whose significance levels are nearly classical in their conservatism, the alternate correction serves quite well for N - n ≤ 7. Tukey goes on to say that the calculation of a correction factor makes this method less compact but in view of the fact that it involves only counting, it may still be an effective competitor in certain circumstances " (p. 33).

The statement of findings begins with the presentation of the results of Tukey's test of significant difference between groups.

Table 1.

Test of Significance of Difference Between Groups on Variables Relating to Physical Disability and Age (* Significant at 5% Level)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Groups</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Ability</td>
<td>A + B</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>A + C</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>B + C</td>
<td>0</td>
</tr>
<tr>
<td>Communication</td>
<td>A + B</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>A + C</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>B + C</td>
<td>1</td>
</tr>
<tr>
<td>Locomotion</td>
<td>A + B</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>A + C</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>B + C</td>
<td>0</td>
</tr>
<tr>
<td>Age</td>
<td>A + B</td>
<td>12*</td>
</tr>
<tr>
<td></td>
<td>A + C</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>B + C</td>
<td>7*</td>
</tr>
</tbody>
</table>
The results shown in Table 1 indicated there was no significant difference in physical impairment between the groups. There was, however, a significant difference in age between two of the groups at the 5% level, but no significant difference in age between the other groups. It is evident also that all groups present much overlapping in age (10 to 13), (11 to 16), and (11 to 14). Because the age of each child is considered in the correlational analysis utilized, the groups were combined to facilitate the statistical treatment.

Response Distributions

A general picture of the results of the subjects' response to the 12 variables tested is shown in Table 2, which indicates the means, standard deviations, and range of scores.

Table 2.
Means and Standard Deviations of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>12.7686</td>
<td>2.1440</td>
<td>10 - 16</td>
</tr>
<tr>
<td>Communication</td>
<td>2.2857</td>
<td>1.2355</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Locomotion</td>
<td>3.6071</td>
<td>1.1969</td>
<td>2 - 5</td>
</tr>
<tr>
<td>General Ability</td>
<td>3.2143</td>
<td>1.2355</td>
<td>1.5 - 5</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>86.1786</td>
<td>12.5375</td>
<td>62 - 107</td>
</tr>
<tr>
<td>Aggression</td>
<td>7.2143</td>
<td>6.4885</td>
<td>0 - 28</td>
</tr>
<tr>
<td>Dependency</td>
<td>10.7857</td>
<td>7.6175</td>
<td>0 - 30</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>8.3571</td>
<td>7.7326</td>
<td>0 - 27</td>
</tr>
<tr>
<td>Depression</td>
<td>7.0357</td>
<td>6.0705</td>
<td>1 - 27</td>
</tr>
<tr>
<td>Likeability</td>
<td>25.1786</td>
<td>11.0790</td>
<td>4 - 39</td>
</tr>
<tr>
<td>Total Negative</td>
<td>33.3929</td>
<td>21.7381</td>
<td>7 - 104</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>59.6429</td>
<td>18.9897</td>
<td>32 - 108</td>
</tr>
</tbody>
</table>
The communication ability, locomotion and general ability were rated independently by the teacher and physical therapist and the results statistically analyzed by computing a Pearson product moment correlation which ranged from .9331 to .7016. The r between teachers' and physical therapists' ratings was .9331 for communication, .8346 for locomotion, .7016 for general ability and .8222 for total rating. The mean ratings indicated these children were moderately to severely handicapped. The ratings ranged from one to five with a score of three indicating moderate disability and four to five as severely disabled.

The data collected in this study were converted to a suitable format for analysis by the IBM Digital Computer housed in the Computer Section at the University of Oregon. The correlates are shown in each table along with the Coefficient of Determination ($r^2$). According to Garrett (1965)

"$r^2$ gives the proportion of the variance of Y which is accounted for by X. When used in this way, $r^2$ is sometimes called the coefficient of determination. When the r between X and Y is .71, $r^2$ is .50. Hence an r of .71 means that 50% of the variance of Y is associated with variability in X" (p. 179)

Despite all the difficulties involved in discerning the psychological effects of physical disability, a number of investigations have been focused on this important problem. Pringle (1964) surveyed the literature published between 1928 and 1962 on the emotional and social adjustment of physically handicapped children and concluded that the amount of systematic research was very limited and that there is no agreement as to the effect of a physical disability on the child's self-concept as measured by his emotional adjustment. Cruickshank (1952), in
his study with physically handicapped adolescents concluded that physically handicapped children are similar to non-physically handicapped children insofar as emotional adjustment is concerned. If, however, as the self-theorists agree, the body-image is an important factor in the phenomenal field of an individual, then the impact of the physical handicap on the personal adjustment of disabled individuals may be significant although the over-all adjustment as depicted on objective pencil and paper tests shows similarity to that of nonhandicapped persons.

**Self-Concept and Physical Handicap**

In the literature relating to development of the self-concept, repeated references are made to the effect of social experiences and physical limitations or assets on the self-concept. With this in mind, this study is concentrating on both phenomena to gain more information on the effect of a distortion in the self-image caused by a physical disability, which often results in a lowered ability of the child to successfully compete with his peers.

**Hypothesis Number One:** There will be a negative relationship between the self-concept score and the severity of the physical handicap.

A review of the literature presented in Chapter Two indicated that self-concept theorists recognized that body-image plays an important role, along with social-environmental experiences with significant people, in the picture an individual forms of himself. The term "body-
image" implies that this is the picture each person has of himself and of his body. The body-image forms part of every person's psychological constitution. When a disease occurs, particularly one that is disabling, the body-image has to take on a new alignment. People react to the child and his body in a special way because of his handicap. This will depend of course on the degree of disability that the handicap imposes and the attitude of the child toward himself and the attitude of his family members, and later his peers. If these attitudes are negative, it would appear that he too could develop a mental picture of his body and its relation to life which could lower his self-esteem.

Table 3.

Correlates and Coefficient of Determination of Variables with Self-Concept

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.0074</td>
<td>.0001</td>
</tr>
<tr>
<td>Communication</td>
<td>.1353</td>
<td>.0183</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.0297</td>
<td>.0008</td>
</tr>
<tr>
<td>General Ability</td>
<td>-.2712</td>
<td>.0735</td>
</tr>
<tr>
<td>Aggression</td>
<td>.0551</td>
<td>.0030</td>
</tr>
<tr>
<td>Dependency</td>
<td>.1846</td>
<td>.0340</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>-.3300</td>
<td>.1089</td>
</tr>
<tr>
<td>Depression</td>
<td>-.1787</td>
<td>.0319</td>
</tr>
<tr>
<td>Likeability</td>
<td>.1651</td>
<td>.0272</td>
</tr>
<tr>
<td>Total Negative</td>
<td>-.0862</td>
<td>.0074</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>-.0265</td>
<td>.0072</td>
</tr>
</tbody>
</table>

Self-concept Mean 86.1786; SD 12.5375 Reject Hypothesis Number 1, r of -.2712, although not significant, was in direction hypothesized.
The self-concept score was obtained by the use of Lipsett's (1958) self-concept scale. This scale is composed of 22 trait items followed by a five point rating scale from one to five. Lower scores were assumed to reflect degree of self-disparagement.

By comparison, Lipsett (1958) obtained a mean of 86.17 for self-concept and an SD of 12.53 for 298 physically normal children in grades four to six.

Observational studies of children with and without disabilities and interviews with their parents have indicated that the disabled child receives less social and interpersonal experience, less responsibility, more maternal nurturance and protection, and that he has lower self-esteem than the nondisabled child (Barker et al., 1955; Bell, 1956; Goodman et al., 1963; Richardson, 1963; and Shere, 1957). Goodman et al. (1963) using low socio-economic children aged 10 to 11 found a consistent preference pattern in rank-ordering types of physical disabilities, in which the facially disfigured child was preferred over the physically handicapped. These correlated highly with adult preferences.

Glick (1953) in his study of 200 cerebral palsied adults found the relatively mildly disabled tended to show poorer adjustments than those whose handicaps were more severe. These maladjustments included insecurity, immaturity, and strong feelings of inferiority. Kammerer (1940), studying 80 cases of sclerosis and osteomyelitis, concluded that physical handicaps do not inevitably lead to emotional maladjustment. He criticizes those who have expressed the opposite point of view on the grounds that these statements were unsupported by experimental
Cruickshank and Dolfin (1949), using the Rath's Self-Portrait test on crippled and non-crippled children, found no significant difference between the two groups of children on emotional adjustment. In 1952 Cruickshank used a projective sentence technique to study the self-concept of 264 crippled children of junior and senior high school age, and 400 physically normal children. The results indicated that the physically handicapped were frequently unable to verbalize self-expressions and self-concepts. Cruickshank (1963) makes mention of the fact that research on physically handicapped children often makes it necessary for the researcher to make adaptations in the standard test for the motor handicapped child, and that these may actually change the equivalent measure value. He has found in his review of the research literature that there is little difference between the emotional adjustment of physically normal and physically handicapped children on pencil and paper tests, but the physically handicapped children are more immature.

It is interesting to note the similarity of the mean self-concept scores found by Lipsett (1959) in her study of physically normal children and the almost identical mean self-concept score of the physically handicapped children in this study. Because this self-concept test was of the paper and pencil type, this could be the reason for the similarity in results, a conclusion which was also observed by Pringle (1964) who reviewed the literature published between 1928 and 1962 on the emotional and social adjustment of physically handicapped
children. He could not find a consensus of opinion, but did note that there were negligible differences on paper and pencil tests between handicapped and nonhandicapped youth. Cruickshank (1954) also made this same observation as to the limitations of the questionnaire, Q sort and rating scales. When he used projective techniques he located significant personality differences between physically normal and disabled subjects. The latter were more immature, unrealistic, and had poorer interpersonal relations. Cruickshank did note also that the physically handicapped made more neutral or ambivalent responses, which could have had a cause-effect relationship on the results.

On the other hand, Richardson, Hastorf and Dornbusch (1964) obtained self-descriptions from 107 children with handicaps and 128 non-handicapped children aged 9 to 11 at a summer camp for the underprivileged in New York city. The results were tape-recorded and analyzed and the findings revealed that the physically handicapped made a higher proportion of negative statements about themselves. Although the differences were not large, they were suggestive of self-deprecation.

The results of two other studies on the self-concept of physically disabled children or adolescents when compared with physically normal in the classroom revealed similar results (Pomp, 1963; Zion, 1963). Smits' study (1946) took a different approach as he compared the degree of severity of disability with the resulting self-concept of 125 and 76 female adolescents attending schools for the normal in the St. Louis area. His results did not agree with those of this study,
for he concluded that severely disabled adolescents have significantly lower self-concept scores than adolescents whose physical disabilities are mild.

A possible explanation of the divergencies of these findings with those of this study could be that this research was conducted on the self-concept of the child who is in a special school for physically disabled children, with whom he could compete successfully. In the above cited studies, the physically disabled subjects, who had lower self-concepts, were integrated with physically normal peers, who were physically superior rivals. The effect of a physical disability on peer acceptance and reputation will be cited later in this study.

**Self-Concept and Age**

It has been noted consistently in child development literature that there is a predictable pattern of growth in all areas of development. These changes have been shown in empirical studies based on physical, intellectual, emotional and social growth. Less apparent, but nevertheless real and crucial in learning and development, are the changes in ways children see and feel about themselves. The individual's self-concept consists not of a single perception of self: it consists of the persisting ways he sees himself in the many life situations he faces or might face. It includes not only his relations to his parents, but to his peers and teachers and other significant persons and his perception of his bodily features and characteristics.

Relatively few studies have been done on the changes in the self-
concept according to age, and at present there are no longitudinal data on which to base a description of the development of the self-concept (Wylie, 1967). The studies which would seem to support the hypothesis regarding age and physical disability are those which were done by Perkins (1958) on increase of self-ideal congruence from fourth to sixth grade in physically normal children. Hurlock (1964) explains the child's ideal as more an index of his "wishful estimate of his real ability, than his real ability" (p. 711). Because of inexperience, the child tends to overestimate his capacities, but as he reaches adolescence his self-evaluation tends to be more accurate and less biased. If, as the self-theorists state, body-image and ability to compete with one's peers are contributing factors to the self-concept, and if the older child has a more realistic picture of his abilities, the following hypothesis would be in order.

**Hypothesis Number Two:** There will be a negative relationship between self-concept and age in the physically handicapped child.

Although this hypothesis was rejected (see Table 4), it does agree with those studies which have shown that physical handicap does not inevitably lead to emotional maladjustment (Pringle, 1964; Kammerer, 1940; Mallinson, 1956) and that the frustrations of a handicapped individual do not necessarily increase with age despite the observations made by Florence Goodenough, author of *Exceptional Children* (1956), that "the young child, lacking extensive experience of normal life, is often less rebellious and unhappy over his limitations
than the older child, who cannot evade a keener realization of his loss (p. 390).

Table 4.

Correlates and Coefficient of Determination of Variables with Age

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>-.1598</td>
<td>.0255</td>
</tr>
<tr>
<td>Locomotion</td>
<td>.1077</td>
<td>.0115</td>
</tr>
<tr>
<td>General Ability</td>
<td>.0409</td>
<td>.0016</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>-.0074</td>
<td>.0001</td>
</tr>
<tr>
<td>Aggression</td>
<td>-.2052</td>
<td>.0421</td>
</tr>
<tr>
<td>Dependency</td>
<td>-.5827**</td>
<td>.3395</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>-.0219</td>
<td>.0004</td>
</tr>
<tr>
<td>Depression</td>
<td>-.4288*</td>
<td>.1838</td>
</tr>
<tr>
<td>Total Negative</td>
<td>-.3929*</td>
<td>.1543</td>
</tr>
<tr>
<td>Likeability</td>
<td>.3921*</td>
<td>.1537</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>-.2108</td>
<td>.0442</td>
</tr>
</tbody>
</table>

Mean age 12.7696 Standard Deviation 2.1440

** Significant at .01  *Significant at .05

Hypothesis number two rejected at 5 per cent level of significance.

Four of the variables in this table reached a level of significance. The peer reputation dependency score indicated a negative r of .5927 with age, which was highly significant at the .01 per cent level, while the depression and total negative peer selection scores were negatively significant at the 5 per cent level. The likeability score was positively correlated with age at the 5 per cent level of confidence.
Patricia Lange (1959) tested this hypothesis on physically handicapped subjects with both congenital and acquired handicaps. She used a projective technique, the Rosenzweig Picture Frustration Study, to measure qualitative reactions to simulated frustrating situations. The results of her study did not indicate that a significant correlation existed between the ages and the extrapunitive scores. Frustration is the result of being unable to cope with one's environment, which results in loss of self-esteem. If this interpretation is given for frustration results, then Lange's findings would indicate no correlation of either positive or negative significance between age and physical handicap, which corroborates the results of this present study.

Long, Henderson and Ziller (1967) reasoned that because physical size and intellectual, motor and social skills increase with age in middle childhood, it is proposed that the child's conception of his own importance will increase as he grows older. They posited there would be a positive relationship between self-esteem and age. They found a significant effect for grade in relation to self-esteem. The highest score was found in the first grade. There was a sharp drop in the second grade, which displayed the lowest score. Scores rose in the third and fourth grades and declined somewhat in the fifth and sixth. These findings are in harmony with Gesell and Ilg's (1946) description of the brashness of the six-year-old and the self-criticism of the seven-year-old, and seem relevant to Piaget's observations about the decline of egocentricity at about this time (Hunt, 1961).

Recent theory and research point to the importance of the self-
concept in understanding and predicting constancies as well as changes
in behavior (Brownfain, 1952; Rogers and Dymond, 1954; Taylor, 1955).
It is generally believed that an individual's concept of himself
achieves a rather high degree of organization during the course of
development and comes to resist change once self-differentiation and
self-definition have taken place (Lecky, 1954). As yet it is not known
by what age the process of self-definition reaches stability (Engel,
1959); the fate of the self-concept in adolescence is still a matter
for speculation. Wylie reports three studies done on the adolescent's
developing self-concept. The first two, Smith and Lebo (1956) and
Mussen and Jones (1957) involve hypotheses about the relationship of
the self-concept to physical maturity. The results of both studies
indicated significant differences between adolescent boys who were
"consistently accelerated" and "consistently retarded" in physical
development. Engel (1959) did a test-retest study on the stability of
the self-concept of 172 subjects over a two-year period. One group of
boys and girls was tested in the eighth and tenth grades, while the
second group was tested in the tenth and twelfth grades, using Q
sorted items. There were no significant differences between the older
and younger groups with respect to self-correlations over the two-year
period. This confirmed Engel's hypothesis that "crystallization of the
self-concept is achieved earlier in development" (Engel, 1959, p. 212).
The fact that there was no difference in age and self-concept in the
physically disabled child in this study could have been due to the self-
concept having become stabilized, and adjustment to the limiting
effects of a disability already accepted by these subjects.

Self-Concept and Peer Reputation

In addition to measuring the emotional adjustment of an individual by studying his self-concept, another means for evaluating the social adjustment of individuals is that of determining the reputation they hold among their peers. If sociometric results have implications for social adjustment problems, it should be possible to distinguish between individuals of high and low sociometric status in terms of how they are received by their fellow group members. Reputation among peers is usually determined by a "guess who" test. This technique requires individuals to identify those group members who best fit each of a series of behavior descriptions. The behavior descriptions include both positive and negative characteristics. Thus, reputation is measured in terms of both social assets and social liabilities. The number of mentions an individual receives on each of the behavior descriptions serves as a measure of his reputation among his peers.

Within recent years the studies of disability have been concentrated on the measurement of psychological effects and there have been several research studies on the social and psychological effects of disability on the growth and development of children. There are those who believe that the personality functioning of the disabled is best understood as reaction to being discriminated against by persons significant to them such as parents, teachers and peers (Cruickshank, 1955; Dembo, Leviton and Wright, 1956; Wright, 1960). Others stress
the importance of variations in body-image (Fisher and Cleveland, 1958). It seems reasonable that perception of one's functional limitations in achieving certain goals can lower self-evaluation and, for the child, being able to compete and to be accepted by his peer group is a very important goal.

To mention a few of the studies on self-concept and peer reputation, reference is made to that of Coopersmith (1959), who reported that fourth-, fifth-, and sixth-graders in his sample showed a positive (.34) correlation between self-esteem and popularity. Lipsett (1958) using upper elementary school subjects, reported a negative correlation between the Children's Manifest Anxiety Scale and a self-concept scale among fourth-, fifth-, and sixth-graders. Thus, it would seem that high anxiety tends to be associated with poor self-concept and low sociometric status. Horowitz (1962) also studied the relationship of anxiety, self-concept, and sociometric status among fourth-, fifth-, and sixth-grade children, and her results indicated significant results for all grade levels for both boys and girls between anxiety and self-concept, anxiety and sociometric status, and self-concept and sociometric status. This study replicated the McCandless et al. (1965) study. Consistent positive correlation between sociometric status and self-concept indicated high sociometric status was associated with high self-concept.

These studies were conducted on physically normal children and it was theorized that a similar finding would result with physically disabled.
Hypothesis Number Three: There will be a positive relationship between self-concept score and likeability score on peer rating.

Table 5.

Correlates and Coefficient of Determination of Variables with Likeability

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.3921*</td>
<td>.1537</td>
</tr>
<tr>
<td>Communication</td>
<td>-.1719</td>
<td>.0295</td>
</tr>
<tr>
<td>Locomotion</td>
<td>.1061</td>
<td>.0112</td>
</tr>
<tr>
<td>General Ability</td>
<td>.1383</td>
<td>.0191</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>.1181</td>
<td>.0139</td>
</tr>
<tr>
<td>Aggression</td>
<td>-.4034*</td>
<td>.1627</td>
</tr>
<tr>
<td>Dependency</td>
<td>-.2660</td>
<td>.0797</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>-.4318*</td>
<td>.1884</td>
</tr>
<tr>
<td>Depression</td>
<td>.4352*</td>
<td>.1893</td>
</tr>
<tr>
<td>Total Negative</td>
<td>-.4888**</td>
<td>.2389</td>
</tr>
<tr>
<td>Total Selection</td>
<td>.0512</td>
<td>.0026</td>
</tr>
</tbody>
</table>

Total Likeability Mean 26.2500  Standard Deviation 11.5970

*Significant at 01 per cent level  **Significant at 05 per cent level

Hypothesis number three rejected.

The instrument used to test the peer reputation was that developed by Wiggins and Winder (1961). This instrument was composed of 59 items and required that specific traits be evaluated. There were five categories of trait identification. The negative traits of aggression, dependency, withdrawal and depression had 12 statements; the likeability trait was composed of eight positive statements: the other
three were filler items and were not included in the final count. The results related to this hypothesis are shown in the preceding table (Table 5).

In contrast to the above stated studies, which showed a significant positive relation between self-concept and peer acceptance, this study with the physically handicapped did not meet the five per cent level of significance. However, the trend was in the direction hypothesized.

Possible explanations of these findings are two-fold. First, it was the impression of the author that there was a strong cohesiveness among these groups of physically handicapped children. They appeared to be rather uncomfortable and loathe to select members of their group as being representative of negative behavior, but when the item was one which was positive in nature, they often selected the majority of their classmates. Cruickshank (1965), who has probably devoted more time to studying the psychological considerations of crippled children than anyone else, has shown that handicapped children are less willing to be the reciprocators of negative feelings than are normal children. He found that the percentage of responses in the "am nice" category for the physically handicapped children is 46.6, and for the normal children 40.1 (critical ratio: 1.53; p value: .12). He has noted also that physically handicapped children tend to give more ambivalent, neutral, or nonsensical responses than do the physically normal children. He explains this on the basis of a handicapped child being less able to evaluate interpersonal relations.

In an effort to add further dimension to the effects of physical
disability on personality traits, peer reputation scores on four negative traits were analyzed as an indication of adjustment. Gronlund (1959) stresses the need for caution in interpreting the number of sociometric choices a pupil receives on a sociometric test, which he says cannot be used as a direct indication of personal and social adjustment. Wiggins and Winder (1961) believed differently. They say:

"The social stimulus value of a child to his peers is a source of observational data that has not been fully exploited as a criterion measure of adjustment. The opportunities for continuous observation over extended periods of time, both inside and outside the classroom, seem to qualify boys as highly informed witnesses of the behavior of their associates. In addition, judgments as to the appropriateness of any given social behavior might do well to include the opinions of members of the social group in question" (p. 644).

The intercorrelations of each of the four negative personality traits of aggression, dependency, withdrawal, and depression with every other variable are presented in Tables 6, 7, 8 and 9. The Wiggins and Winder peer rating questionnaire which was used in this study was constructed to rate five areas of behavior: namely, aggression, depression, withdrawal, dependency, and likeability as the criterion measure of adjustment. The results of the intercorrelation variables with likeability has been indicated in Table 5 on page 123 under hypothesis number two.

The intercorrelations of these four negative personality traits will be presented in separate tables. A definition of the behavior characteristics as described by Wiggins and Winder will precede the
table. Each of the four negative characteristics has twelve statements, so that the subject has a possibility of $12 \times (n - 1)$ for each category (for he did not rate himself).

In the development and use of the peer nomination inventory, several assumptions were made by Wiggins and Winder, and two of these are especially relevant to the research reported. First, it was assumed that, while there are intra-individual variations in the frequency, intensity, and form in which any behavior system is manifest in actions, there are characteristic inter-individual differences in modal frequency, intensity, and form of manifestation of the several behavior systems and interpersonal relationships. Second, it was assumed that in groups which exist for long periods of time with frequent transactions among members, social reputation in the group is a valid, though indirect, index of the modal interpersonal responses of the group. In other words, among individuals who are well acquainted, social reputation is related to social behavior.

In selecting the statements of items to be used in the nomination inventory, total agreement had to be reached among the independent sortings of behavior statements by three judges as to the behavior trait being described. The first behavior trait is defined as follows:

**aggression:** the child, by implication or act, is hurtful or destructive. His behavior may be described as quarrelsome, antagonistic, negativistic, disruptive, defiant, etc.
Table 6.

Correlates and Coefficient Determination of Variable with Aggression Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.2052</td>
<td>.0421</td>
</tr>
<tr>
<td>Communication</td>
<td>.1399</td>
<td>.0195</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.1175</td>
<td>.0138</td>
</tr>
<tr>
<td>General Ability</td>
<td>-.1122</td>
<td>.0125</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>.0551</td>
<td>.0030</td>
</tr>
<tr>
<td>Dependency</td>
<td>.6139**</td>
<td>.3768</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.4605*</td>
<td>.2120</td>
</tr>
<tr>
<td>Depression</td>
<td>.5818**</td>
<td>.3384</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.8399**</td>
<td>.7054</td>
</tr>
<tr>
<td>Total Likeability</td>
<td>-.4034*</td>
<td>.1627</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>.7151**</td>
<td>.5113</td>
</tr>
</tbody>
</table>

Aggression Mean 7.2143  Standard Deviation 6.4885

**Significant at 01 per cent level of confidence

*Significant at 05 per cent level of confidence

An examination of this table reveals there was almost no relation between self-concept and the aggression trait. However, four of the variables reached the highly significant one per cent level of confidence (dependency, depression, total negative, and total selection score) while two others reached the five per cent level (withdrawal and likeability). This probably indicates a halo effect of negative traits.

The negative trait of dependency is described next by the following definition:
dependency: the child, by implication or act, attempts to secure attention, approval or affection from adults or peers by physical proximity, verbal demands or any device which will focus attention on himself.

The result of the intercorrelation of this personality trait with the other variables being tested in this study is shown in Table 7.

Table 7.

Correlates and Coefficient of Determination of Variables with Dependency Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>( r )</th>
<th>( r^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.5827</td>
<td>.3395</td>
</tr>
<tr>
<td>Communication</td>
<td>.0599</td>
<td>.0035</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.2025</td>
<td>.0410</td>
</tr>
<tr>
<td>General Ability</td>
<td>-.3039</td>
<td>.0923</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>.1846</td>
<td>.0340</td>
</tr>
<tr>
<td>Aggression</td>
<td>.6139**</td>
<td>.3768</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.1277</td>
<td>.0163</td>
</tr>
<tr>
<td>Depression</td>
<td>.6377**</td>
<td>.4066</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.7572**</td>
<td>.5733</td>
</tr>
<tr>
<td>Total Likeability</td>
<td>-.2660</td>
<td>.0707</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>.7043**</td>
<td>.4960</td>
</tr>
</tbody>
</table>

Dependency Mean 10.7857    Standard Deviation 7.6175

**Significant at 01 per cent level of confidence

Table 7 contains the results of the correlational analysis between dependency and the other variables. It is noted that highly significant positive results between depression, aggression, and total
selection score were obtained, while a highly negative significant \( r \) existed between dependency and age (a younger child is expected to be more dependent).

The definition of withdrawal behavior is as follows:

withdrawal: the child, by implication or act minimizes interaction with others. Thus, he characteristically does not respond to situations which would stimulate participation with other children. He tends to be described by others as quiet, nonaggressive, shy (shies away from), nonparticipating, etc.

The correlations between the withdrawal nomination scores and the other variables are shown in Table 8.

Table 8.

Correlates and Coefficient of Determination of Variables with Withdrawal

<table>
<thead>
<tr>
<th>Variable</th>
<th>( r )</th>
<th>( r^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.0219</td>
<td>.0004</td>
</tr>
<tr>
<td>Communication</td>
<td>.1983</td>
<td>.0393</td>
</tr>
<tr>
<td>Locomotion</td>
<td>.0117</td>
<td>.0001</td>
</tr>
<tr>
<td>General Ability</td>
<td>.1487</td>
<td>.0221</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>-.3300</td>
<td>.1089</td>
</tr>
<tr>
<td>Aggression</td>
<td>.4605*</td>
<td>.2120</td>
</tr>
<tr>
<td>Dependency</td>
<td>.1277</td>
<td>.0163</td>
</tr>
<tr>
<td>Depression</td>
<td>.5220**</td>
<td>.2724</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.6837**</td>
<td>.4674</td>
</tr>
<tr>
<td>Likeability</td>
<td>-.4318*</td>
<td>.1864</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>.5910**</td>
<td>.2693</td>
</tr>
</tbody>
</table>

Withdrawal Mean 8.3571  
Standard Deviation 7.7326

**Significant at 01% level  
*Significant at 05% level
An examination of Table 8 reveals an r value which is significant at the one per cent level for depression, total negative and total selection scores. Comparing aggression and withdrawal shows these traits to be significant at the five per cent level of confidence. One explanation could be that this aggression is the covert type in which the hostility is turned inward and the child learns to withdraw from the hostile provoking incident.

Wiggins and Winder acknowledge that their rating scale on depression was experimental, for this negative trait has been found difficult to evaluate. However, the definition they give is as follows:

**depression**: the child, by implication or act, can be considered as being overly moralistic in his self-evaluation, and as a consequence is "unhappy". He tends to be described as critical, accepts blame, etc.

Table 9 contains five variables which were positively correlated at the one per cent level, which indicates that depression is closely aligned with the other behavior patterns of aggression, dependency and withdrawal. Because they are all negative scores, it follows logically that the correlation between total negative and total selection score was also highly significant.

When age was correlated with the depression score, the results indicated a significant negative relationship. This could be explained on the basis that the older child had either learned to accept his disability, or because of longer therapeutic treatment he was able to function at a higher level. The r for likeability and depression was
negative at the five per cent level, indicating that being depressed does not add to the popularity of the child.

Table 9.

Correlates and Coefficient of Determination of Variables with Depression

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.4288*</td>
<td>.1838</td>
</tr>
<tr>
<td>Communication</td>
<td>-.1347</td>
<td>.0181</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.1688</td>
<td>.0284</td>
</tr>
<tr>
<td>General Ability</td>
<td>-.2257</td>
<td>.0509</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>-.1787</td>
<td>.0319</td>
</tr>
<tr>
<td>Aggression</td>
<td>.5818**</td>
<td>.3384</td>
</tr>
<tr>
<td>Dependency</td>
<td>.6377**</td>
<td>.4066</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.5220**</td>
<td>.2724</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.8621**</td>
<td>.7432</td>
</tr>
<tr>
<td>Likeability</td>
<td>-.4352*</td>
<td>.1873</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>.7211**</td>
<td>.5199</td>
</tr>
</tbody>
</table>

Depression Mean 7.0357     Standard Deviation 6.0705

*Significant at 01 per cent level of confidence

**Significant at 05 per cent level of confidence

An examination of these tables indicates that there tends to be a cluster of traits, so that this present investigation shares the implicit assumptions of recent studies (Mitchell, 1956; Lesser, 1959; Walder et al., 1961; Natchez, 1960) that theoretically important adjustment variables may be assessed by adaptations of the "guess-who" method. The selection of variables for inclusion in the present study represented a working compromise between what is known and what is
suspected with regard to the significant dimensions of childhood psychology. These variables may be thought of as "behavior systems". Whiting and Child (1953) defined this concept as "a set of habits or customs motivated by a common drive and leading to common satisfactions" (p. 45). The behavior systems of aggression and dependency have been primary foci of the investigations of developmental behavior theorists (Dollard and Miller, 1950; Whiting and Child, 1953; Sears et al., 1953; Bandura and Walters, 1959) who tend to view behavior pathology as reflecting disturbances within the systems. Wiggins and Winder suggest that the behavior systems of withdrawal and depression have not been extensively studied because of their apparent symptomatic quality, which suggests considerable inference about subjective experience.

Wiggins and Winder are careful to point out that it is not assumed that the constructs of aggression, dependency, and depression were necessarily part of the conceptual system of the children. However, they believe that the specific behaviors subsumed under these constructs were quite recognizable by children of this age (fourth, fifth, and sixth grade). The results of this study are compared with those of Wiggins and Winder in Table 10.

Inspection of Wiggins and Winder correlation patterns suggests two relatively independent clusters of variables that are differently related to the likeability dimension. Aggression and dependency form one such cluster (r = .743), while withdrawal and depression form the other (r = .620). The correlation of .294 between aggression and withdrawal attests to the relative independence of these possible clusters.
Moreover the aggression and dependency scales tend to be least influenced by likeability considerations (r's of -.234 and -.327 respectively) while the withdrawal and depression scales are more highly correlated with this variable (r's or -.539 and -.412).

Table 10.

Comparison of Intercorrelations of the Wiggins and Winder (1962) Study and the Present Study

<table>
<thead>
<tr>
<th>Intercorrelations</th>
<th>This Study</th>
<th>Wiggins and Winder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggression vs. Dependency</td>
<td>.6139</td>
<td>.743</td>
</tr>
<tr>
<td>Aggression vs. Withdrawal</td>
<td>.4605</td>
<td>.294</td>
</tr>
<tr>
<td>Aggression vs. Depression</td>
<td>.5818</td>
<td>.476</td>
</tr>
<tr>
<td>Aggression vs. Likeability</td>
<td>-.4034</td>
<td>-.234</td>
</tr>
<tr>
<td>Dependency vs. Withdrawal</td>
<td>.1277</td>
<td>.467</td>
</tr>
<tr>
<td>Dependency vs. Depression</td>
<td>.6377</td>
<td>.620</td>
</tr>
<tr>
<td>Dependency vs. Likeability</td>
<td>-.2660</td>
<td>-.327</td>
</tr>
<tr>
<td>Withdrawal vs. Depression</td>
<td>.5220</td>
<td>.620</td>
</tr>
<tr>
<td>Withdrawal vs. Likeability</td>
<td>-.4318</td>
<td>-.539</td>
</tr>
<tr>
<td>Depression vs. Likeability</td>
<td>-.4352</td>
<td>-.412</td>
</tr>
</tbody>
</table>

In this present study similar clusters were obtained, except that in the case of aggression and withdrawal, the correlation was higher (r of .4605, compared to Wiggins and Winder's r of .294), indicating that the physically handicapped child does not have the ability to overtly express his aggression and employs a withdrawal defense mechanism, so that these two variables would not be considered independent clusters for the physically disabled child, as they were for the Wiggins and Winder study.
The intercorrelations on these disabled subjects were higher for aggression vs. depression (.5818) indicating that the physically handicapped child is more prone to depression. This finding was also cited by Mussen and Newman (1958) and Cruickshank (1958).

The aggression and likeability intercorrelation was much higher for these subjects (r of -.4034) suggesting that overt aggressive behavior is more unacceptable to the physically handicapped peer group than to physically normal children. A possible explanation for this finding could be that the parents of the physically disabled child have often been found to deny the existence of the handicap, and not recognize that this child is more frustrated and anxious in his attempts to meet their expectations. As Cruickshank (1958) found in her research, the physically handicapped child is less willing to be the recipient of negative feelings than are normal children (p. 335). Richardson et al. (1964), in their study of the physically handicapped child, found that boys use aggression more, whereas handicapped girls use it less than the nonhandicapped children they used as a control group (p. 905).

In 1964 Wiggins and Winder conducted another research project to further validate the peer nomination inventory, in which social reputation and social behavior were analyzed. These authors conducted two studies on the congruence of reputation and overt behavior. Subjects were 255 fifth- and sixth-grade boys. The peer nomination inventory (Wiggins and Winder, 1961) was used to assess the reputation of each boy for aggression, dependency, withdrawal, depression and likeability. Subjects were assigned to high, medium and low aggression
reputation groups and to analogous dependency reputation groups. Then, the subjects were observed respectively in a situational test of aggression, and in a situational test of dependency. Their findings support the conclusion that reputation is predictive of overt interpersonal behavior. A tentative conclusion is that overt dependency and overt aggression are less closely related than are those aspects of reputation. More specifically, the results are a partial validation of the aggression and dependency scales of the Peer Nomination Inventory. Their method of validating this instrument was to use the results of the Peer Nomination Inventory scores and select six subjects who represented high, medium, and low positions on the behavior traits being investigated. Observers were used to record aggression and dependency respectively according to detailed checklists, which had been pretested. In both situations two observers were present regularly. An extra observer was present to provide for assessment of agreement between raters.

In the study cited above (Wiggins and Winder, 1964) covariance analysis indicated that the P.N.I. aggression is related to observed aggression at the one per cent level of significance. However, the correlation between observed aggression and observed dependency was only .34 at the one per cent level of significance. This correlation is substantially less than the reported correlation of .74 between aggression and dependency variables in the Wiggins and Winder (1961) study. These authors attempt to explain this difference by saying that this discrepancy may effect one or more of several influences. For
example, stylistic response tendencies, mediated by the P.N.I. method, may be less influential than the ratings given by trained observers of the situational tests.

Gronlund (1959) has made an extensive study of sociometry in the classroom and mentions that one of the more common phenomena in sociometric testing is the uneven distribution of sociometric choices. A relatively small number of group members receive a large number of sociometric choices, while others receive few or none. Hurlock (1964) further explains this phenomenon by referring to it as the "halo" effect. The "psychological halo" is an extension of a person's reputation, which provides others with a basis for making judgments about the person. The psychological halo of a person with a good reputation predisposes others to judge him favorably, whereas a child with a "negative halo" will be judged unfavorably. For example, if two children are fighting, the child who is known as a "good sport" will be judged far more favorably than the child who is known as a "bad sport". Consequently, a favorable reputation contributes to social acceptance just as an unfavorable reputation detracts. The results in this present study on intercorrelation of variables indicated that there were highly significant results between the negative characteristics, especially as they related to aggression. This would indicate that a "negative halo" effect was operating in this situation. While a child's reputation and status in the group are determined partly by his actual behavior, they are more influenced by the picture children carry in their minds of him and of the group in which he is identified.
According to Hurlock, this means that once a child has built up an identity or reputation, it is hard to change. The result is that the accepted remain accepted, the outcast usually remain outcast, and the neglected continue to remain on the fringe of things.

Both Laughlin (1954) and Gronlund (1959) stress that the number of sociometric choices a pupil receives on a sociometric test cannot be used as a direct indication of his personal and social adjustment. They suggest, however, that the disproportionate number of adjustment problems among socially isolated and rejected pupils may make sociometric results valuable for identifying pupils who are most apt to have adjustment difficulty. They can serve, therefore, as a screening device for locating potential cases of maladjustment. In the Wiggins and Winder (1964) study, which was conducted to further validate the Peer Nomination Inventory Test used in this study, findings did support the conclusion that reputation is predictive of overt interpersonal behavior in the areas of aggression and dependency.

Pringle (1964), in his review of the descriptive studies on emotional and social adjustment of physically handicapped children between the years 1928 and 1962, concluded that

"while most comparative studies show the handicapped child to be less mature and more disturbed than those without any disabilities, the consensus of opinion and weight of evidence - at present at any rate - seem fairly heavily balanced against the view that the handicapped are inevitably maladjusted. That behavior and personality are bound to be affected where the disabled physique has seriously limiting, depriving effects, whether physically, socially, or both, is likely to be disputed. However, even then it would be argued by most that physique is only one factor in an extensive context of environmental and personal conditions
acting together (Barker et al., 1953). Furthermore, available data has failed to show any evidence of a definite association between a particular disability and a particular behavior characteristic" (p. 213).

To insure acceptance by the peer groups, the child learns that he must accept the group interests and values and must have learned physical and social skills similar to those of his peers. The process of developing special skills is catalyzed not only by the school but by the peer group. Parents can always find something good in their child. The child feels that his parents accept him, not because of anything he can do, but because he is their child and they love him. Acceptance by peers, on the other hand, depends primarily on what the child can offer, his talents, his assets, his skills. Acceptance must now be earned the hard way. The child who has no skills or desirable characteristics is usually rejected quickly and pointedly. The reaction of the peer group helps the child define himself and exerts a major influence on his self-concept.

Physically handicapped children often find themselves left out of many activities that their classmates enjoy; the few extra-curricular activities they can participate in generally have a low prestige value (Hurlock, 1964). Cruickshank (1948) and Force (1956) conducted studies on the status of physically handicapped children in the regular classroom. Force suggested that the physically handicapped child held a minority status position in the classroom similar to that of various religious, racial and cultural groups.

As has been stated previously in this chapter, physical disability does limit the child's interaction with his peer group and often
results in maladjustment with personality problems which could affect
the child's acceptance by his classmates. Because of these implications, the following hypothesis was tested in this study:

**Hypothesis Number Four:** There will be a positive relationship between severity of physical handicap and total negative peer rating scores.

This hypothesis was tested by examining the intercorrelation variables of total negative peer reputation scores with the effect of physical disability on locomotion and ability to care for one's own needs (see tables 11 and 12).

Table 11.

Correlates and Coefficient of Determination of Variables with Locomotion

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.1077</td>
<td>.0115</td>
</tr>
<tr>
<td>Communication</td>
<td>-.1217</td>
<td>.0148</td>
</tr>
<tr>
<td>General Ability</td>
<td>.2970</td>
<td>.0882</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>-.0297</td>
<td>.0008</td>
</tr>
<tr>
<td>Aggression</td>
<td>-.1175</td>
<td>.0138</td>
</tr>
<tr>
<td>Dependency</td>
<td>-.2025</td>
<td>.0410</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.0117</td>
<td>.0001</td>
</tr>
<tr>
<td>Depression</td>
<td>-.1688</td>
<td>.0284</td>
</tr>
<tr>
<td>Total Negative</td>
<td>-.1490</td>
<td>.0222</td>
</tr>
<tr>
<td>Total Positive</td>
<td>.1061</td>
<td>.0112</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>-.1058</td>
<td>.0111</td>
</tr>
</tbody>
</table>

Locomotion Mean 3.6071 Standard Deviation 1.1969

The mean score here indicates that these children were moderately to severely handicapped, with the majority of them having to use
either crutches or wheelchairs.

The only correlation results showing any noticeable relation to locomotion were a positive $r$ of .2970 with general ability and a negative $r$ of .2025 with dependency. However, none of the results cited in Table 11 reached the level of significance.

Table 12.

Correlates and Coefficient of Determination of Variables with General Ability

<table>
<thead>
<tr>
<th>Variables</th>
<th>$r$</th>
<th>$r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.0409</td>
<td>.0016</td>
</tr>
<tr>
<td>Communication</td>
<td>.4315*</td>
<td>.1861</td>
</tr>
<tr>
<td>Locomotion</td>
<td>.2970</td>
<td>.0882</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>.2712</td>
<td>.0735</td>
</tr>
<tr>
<td>Aggression</td>
<td>-.1122</td>
<td>.0125</td>
</tr>
<tr>
<td>Dependency</td>
<td>-.3039</td>
<td>.0923</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.1487</td>
<td>.0221</td>
</tr>
<tr>
<td>Depression</td>
<td>-.2257</td>
<td>.0509</td>
</tr>
<tr>
<td>Total Negative</td>
<td>-.1501</td>
<td>.0225</td>
</tr>
<tr>
<td>Total Positive</td>
<td>.1383</td>
<td>.0191</td>
</tr>
<tr>
<td>Total Selection Score</td>
<td>-.0874</td>
<td>.00763</td>
</tr>
</tbody>
</table>

General Ability Mean 3.2143  Standard Deviation 1.2355

*Significant at 5 per cent level of confidence

Many of these children had cerebral palsy, resulting in a high percentage of neuro-muscular difficulties which affect general ability, locomotion, and ability to speak. Consequently it is not surprising to find an $r$ of +.4315 between general ability and communication, which was significant at the five per cent level. A positive correlation of
.2970 between general ability and locomotion, although not significant, shows the multiplicity of handicaps caused by this condition.

Table 13.

Correlates and Coefficient of Determination of Variables with Total Negative

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.3929*</td>
<td>.1543</td>
</tr>
<tr>
<td>Communication</td>
<td>.0956</td>
<td>.0091</td>
</tr>
<tr>
<td>Locomotion</td>
<td>.1490</td>
<td>.0222</td>
</tr>
<tr>
<td>General Ability</td>
<td>.1501</td>
<td>.0225</td>
</tr>
<tr>
<td>Self-concept</td>
<td>-.0862</td>
<td>.0074</td>
</tr>
<tr>
<td>Aggression</td>
<td>.0551</td>
<td>.0030</td>
</tr>
<tr>
<td>Dependency</td>
<td>.7572**</td>
<td>.5733</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.6837**</td>
<td>.4674</td>
</tr>
<tr>
<td>Depression</td>
<td>.8621**</td>
<td>.7432</td>
</tr>
<tr>
<td>Total Positive</td>
<td>-.4888**</td>
<td>.2389</td>
</tr>
<tr>
<td>Total Selection</td>
<td>.8462**</td>
<td>.7160</td>
</tr>
</tbody>
</table>

Total Negative Mean 33.3929   Standard Deviation 21.7381

*Significant at 01 per cent level  **Significant at 05 per cent level

Hypothesis Number four rejected.

It is noted that this hypothesis was not only rejected because it did not reach the five per cent level of significance; instead there was a slight negative trend. This hypothesis was based on previous studies on the physically handicapped child, but in each case, the subjects were minority members in a group of physically normal children and would tend to be rejected. Force's study (1956), referred to earlier, sheds light on the sociometric status of an ethnic or social minority
member in a peer group situation. This study does agree with that of Soldwedel and Terill (1957), who reported that ten physically handicapped children in a class of 30 pupils had sociometric status scores which were equivalent to those of the nonhandicapped children, indicating physical deformity need not result in peer rejection.

The theoretical support for the above stated assumption had to do with the effect of disability upon the ability to engage in life experiences and is found primarily in the writings of Barker and his associates (1953), Meyerson (1955) and Wright (1960). Of concern to these writers is the effect of variation in physique upon the psychological situation of the individual. Their approach is an application of Lewin's field theory. Because of this variation, one is able to distinguish friend from nonfriend, one sex from another and members of one racial group from those of another. While this variation is typically regarded with favor, extremes of variability are given differential values, depending upon the demands of a given situation. Barker and his colleagues review numerous studies in the field of somatopsychology, and suggest several points basic to a consideration of the topic. They suggest that physique has varied significance. It is only one among many factors determining behavior, especially if body-image is considered to be an influential factor in the developing self-concept, which many psychologists regard as the "core" around which behavior evolves.

Two studies, Larson (1958) and Force (1956) used different methods for gathering data but their results are in general accord
regarding the effect of physical disability upon social and personal development. Neither, it seems, is able to discern between purely physical or purely social factors in accounting for their results. Larson's study was on the preschool experiences of disabled children as compared to a matched group of children without physical disabilities. Significant differences were found in the amount of socialization, knowledge and experience on 52 out of 61 individual items. All obtained differences favored the physically normal group.

Force (1956) compared the social position of physically handicapped children with that of their nonhandicapped classmates in integrated elementary school classes. The children studied were 63 physically handicapped and 361 nonhandicapped children in 14 elementary classes from the first through the sixth grades. All children were of normal intelligence, with the handicapped children afflicted by defective vision, defective hearing, or cerebral palsy. A near-sociometric instrument was administered to determine the children's choices of friends. The physically handicapped children were significantly underchosen as friends. There was a tendency for both handicapped and nonhandicapped children to choose friends within their own groups, indicating to Force a low degree of social integration. Those chosen from among the handicapped were those whose disabilities were less obvious to their peers.

These two studies in particular, were used as the basis for the preceding hypothesis by this author. If nonhandicapped children have had greater social experiences, and greater opportunities to learn
motor skills, they will have more to offer to their peer group. Not only is the physically handicapped child frequently curtailed in the opportunity to develop social skills, but the added burden of being "different" in physical appearance can result in his being rejected by his peer group.

**Self-Concept and Ability to Communicate**

Language is a basis of communication with others, and speech is only one form of language, in which articulate sounds or words are used to convey meaning. Children do not learn all at once or at any given time how to speak with adult proficiency. Children arrive at proficiency for each of the components of speech - gesture, voice, articulative sound, and language - at different developmental periods.

From the point of view of the listener, any child who speaks so that attention is distracted from what is being said to the manner of its production, may be considered as having defective speech (Eisenson, 1965).

Johnson et al. (1956) summarizes the effects of speech disorders on personality. His summary serves to highlight the circular influence.

"The psychology of the handicapped is basically the psychology of frustration. The handicap of impaired speech is no exception to this rule. In fact, there is hardly anything more frustrating, in ways that matter deeply, than something that constantly interferes with our relationship to other people.

"The relationship between speech and personality is ... a two-way affair. They affect each other, and the effect is not only circular, but also cumulative ... speech characteristics once created tend to affect the personality in ways that insure the further development" (p. 59-60).
The above studies of the effect of speech disorders on personality development would seem to support the following hypothesis:

**Hypothesis Number Five:** There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by total selection score.

The following two tables indicate the statistics on communication and total selection scores.

**Table 14.**

Correlates and Coefficient of Determination of Variables with Communication

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.1598</td>
<td>.0255</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.1217</td>
<td>.0148</td>
</tr>
<tr>
<td>General Ability</td>
<td>.4315*</td>
<td>.1861</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>.1353</td>
<td>.0183</td>
</tr>
<tr>
<td>Aggression</td>
<td>.1399</td>
<td>.0195</td>
</tr>
<tr>
<td>Dependency</td>
<td>.0599</td>
<td>.0035</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.1983</td>
<td>.0393</td>
</tr>
<tr>
<td>Depression</td>
<td>-.1347</td>
<td>.0181</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.0956</td>
<td>.0091</td>
</tr>
<tr>
<td>Total Positive</td>
<td>-.1719</td>
<td>.0295</td>
</tr>
<tr>
<td>Total Selection</td>
<td>.0045</td>
<td>.0002</td>
</tr>
</tbody>
</table>

Mean Communication =-2.2857  Standard Deviation =-1.2355

*Significant at 5 per cent level of confidence

Hypothesis number five rejected.

The results of this table indicate that communication and general ability are significantly related at the five per cent level. As stated
previously, many of these children had cerebral palsy, which often involves extensive neuro-muscular defects. Although the results were not significant, the correlation of communication and withdrawal indicated a positive relation of .1983. In reality this is a negative result, as the higher the communication rating, the more severe is the impairment. Withdrawal is a defense mechanism frequently used when one is lacking the required social skills to compete with one's peers, but apparently these children had learned to communicate with their peers in an effective non-verbal fashion.

Table 15.

Correlates and Coefficient of Determination of Variables with Total Selection Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.2103</td>
<td>.0442</td>
</tr>
<tr>
<td>Communication</td>
<td>.0045</td>
<td>.0002</td>
</tr>
<tr>
<td>Locomotion</td>
<td>-.1058</td>
<td>.01119</td>
</tr>
<tr>
<td>General Ability</td>
<td>-.0874</td>
<td>.076387</td>
</tr>
<tr>
<td>Self-Concept</td>
<td>-.0265</td>
<td>.0072</td>
</tr>
<tr>
<td>Aggression</td>
<td>.7151**</td>
<td>.5113</td>
</tr>
<tr>
<td>Dependency</td>
<td>.7043**</td>
<td>.4960</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>.5190**</td>
<td>.2693</td>
</tr>
<tr>
<td>Depression</td>
<td>.7211**</td>
<td>.5199</td>
</tr>
<tr>
<td>Likeability</td>
<td>.0623</td>
<td>.0038</td>
</tr>
<tr>
<td>Total Negative</td>
<td>.8462**</td>
<td>.7160</td>
</tr>
<tr>
<td>Total Positive</td>
<td>.0512</td>
<td>.0026</td>
</tr>
</tbody>
</table>

Mean Total Selection 49.6429  Standard Deviation 18.9897

**Significant at 01 per cent level of confidence

*Significant at 05 per cent level of confidence
Hypothesis number five rejected.

Though the results of this study did not show significant relationships between ability to communicate and the total selection score, there were interesting trends related to the personality traits studied. For example, there was a slight positive trend between withdrawal, dependency, and aggression. This seems to be in line with Van Riper's (1954) study with speech defectives as a group. He was especially impressed with the speech defective's tendency to employ either aggressive or withdrawal tactics. He found too, that hostility and anxiety seem to be the key behavioral traits of speech defectives. Observations such as Van Riper's are made on the basis of clinical experience. The behavioral traits are certainly not unique for speech defective persons but are found among many persons with minor as well as major adjustment problems. Yet, the relationship between speech deficiency and maladjustment is likely to be causal rather than merely coincidental. Berry and Eisenson (1956), after reviewing some of their research literature on the relationship between personality traits and defective speech, conclude:

"There seems to be a tendency for speech defective individuals to present a personality picture which includes traits considered to be socially undesirable. Tendencies toward maladjustment seem to increase as the speech defectives grow older. A tendency for speech defectives to have other limitations such as poor motor control makes it difficult to determine the direct relationship between the personality, the maladjustment, and the defective speech. It may be that together the speech defect and the other limitations constitute a constellation which is conducive to maladjustment" (p. 17).

Children who are able to communicate well with others make
better social adjustments than children who lack the ability, or who have it but fail to use it for fear of making mistakes. Studies of popularity show that among children of all ages, those who express themselves with words as well as in action are more popular, other factors being equal, than those who are quiet and reserved. Furthermore, those who talk more about other people or things are more popular than those who are so self-bound that the conversation centers around themselves (Bonney, 1955; Dreger, 1955).

Little research has been done on the effect of defective speech on social adjustment; the research that was reviewed by this author was concerned mainly with stutterers. Fiedler and Wepman (1951) investigated self-concept of stutterers by comparing a group of ten adult men stutterers and a controlled group of six non-stutterers and their responses to 76 statements descriptive of personality traits. They concluded that the stutterers' self-concept showed no characteristic difference from that of the non-stutterer. This present study did indicate a slight positive relationship between the self-concept score and the ability to communicate, although it was not significant. Murphy and Fitzsimmons (1960) consider, on the basis of their own study and a broad review of the literature, that the stutterer's self-concept is dominated by feelings of inadequacy and insecurity, both born of parent-related anxiety. They say that the stutterer's speech as well as his overall adjustment problems are characterized by underlying lower self-concept - lower in comparison with that of the ideal self - than we are likely to find among peer non-stutterers.
Conclusion

In attempting to draw conclusions on the effects of peer interactions upon self-concept, it appears equally likely that self-concept affects interaction with one's peers. These alternative possibilities appear consistent with research findings about other presumed influences on self-concept, such as physical appearance and capability, intellectual ability and achievement, and psychological adjustment. That is, the development of self-concept seems most appropriately viewed as dependent upon the concomitants of a child's interaction with his parents and with other persons. Regardless of the direction of results, these interactions appear important in considering children whose self-perceptions are discrepant from others' perceptions of them. However, this study did not include a special analysis of the factors responsible for those children whose self-ratings were widely discrepant from their peers'. Further research in this area is suggested.

The failure to support these hypotheses could be due to several factors other than the small sample. A pertinent observation which could color the results was that these children tended to omit many items. To illustrate, there were 59 items on the Nomination Inventory, so that each subject had a total possible selection of 59 X (N-1) (the subject did not rate himself). In group one, the highest nomination score was 108, with a possible score of 472; in group two, 86 was the highest score, total possible, 708; and in group three, the highest score obtained was 49, within a total possible of 285. Wiggins and
Winder (1961) also noted that the majority of their subjects were seen as possessing few or none of the deviant behaviors specified by the scales. They suggest that because of this, the P.N.I. may have somewhat limited usefulness for studies of normal personality functioning; however, all scales revealed a J curve distribution which is typical of unconventional behavior. It must be remembered also that these scores were based on recall and value judgments, and not on actual observed behavior.
CHAPTER V

SUMMARY AND CONCLUSION

The major concerns of this study were the effect of a physical handicap on the child's self-concept and the relation between his self-concept and peer reputation. The term "self-concept" is often used, particularly in school settings, to explain children's behavior. In addition, the use of sociometric testing has been frequently employed to enable the teacher not only to assess the social situation of her students, but also to locate those individuals who are considered rejectees or isolates by their peers.

The hypotheses were formulated in terms of the theories regarding the effect of physical disability on self-concept and peer reputation. It was further hypothesized that age, the degree of impairment, and certain abilities affected by the disability would have a significant effect on both of these areas of study.

The general hypotheses tested were:

1. There will be a negative relationship between the self-concept score and the severity of the physical handicap.
2. There will be a negative relationship between the self-concept and age in the physically handicapped child.
3. There will be a positive relationship between the self-concept score and the likeability score on peer rating.
4. There will be a positive relationship between severity of physical handicap and total negative peer rating.
scores.

5. There will be a negative relationship between impairment of ability to communicate and impact on peer group as measured by total selection score.

The subjects of this study were 28 children whose physical disabilities were so severe as to require their attendance in special classes for the physically handicapped. These children ranged in age from 10 to 16, with a mean age of 12. The disabilities were neuro-motor in nature, resulting from post polio, accidents, spina bifida, osteo imperfecta, and cerebral palsy. The majority were affected with varying degrees of cerebral palsy.

The data was collected by the author in the spring of 1966, using three rating scales. The Self-Concept Scale was that devised by Lipsett (1958) and was used in its entirety; the Peer Nomination Inventory Scale was that constructed by Wiggins and Winder (1961) and used as suggested, except for the elimination of three filler items which would not have been appropriate for these children. The Physical Rating Scale was formulated by the author to measure the degree of the child's disability in locomotion, communication, and general ability to care for his own needs. The latter was rated by the teacher and physical therapist and the results averaged.

The selection of these tests was based on two considerations: first, the inability of the majority of these children to speak or write because of the existence of crippling diseases; and second, the time element. These children tired easily and in addition they had a
carefully controlled schedule of school work, therapy, and rest, so that little time was available for outside research. In addition, this author was trying to avoid the pitfall noted by Newland (1952) that exceptional children are more often assessed than tested because the children are unable to complete the usual forms of tests, and in many cases, great liberties are taken to adapt individual examinations. He goes on to say that often a "cafeteria" approach is adopted, in which items are lifted from various tests and then combined into another one. The Wiggins and Winder Peer Nomination Inventory and the Lipsett Self-Concept Scale were chosen by this author because not only did they meet the first two criteria, but in addition, the authors of these scales had made an attempt to establish validity and reliability. A review of the self-concept research by Wylie (1961) and Sociometry by Gronlund (1958) reveals the fact that very few of the authors of self-concept or sociometric tests have presented any information on the validity or reliability of their instruments.

Treatment of the Data

Because no significant difference was found between the three groups of children after using Tukey's Test (1957), they were combined for ease of statistical analysis. The data was then put into a suitable formula and submitted to an IBM 1960 Digital Computer housed in the Computer Center, University of Oregon, and multiple correlational analysis was obtained. Comparisons of the various intercorrelational results indicated degree of significance, if any, with the critical
ratio set at .05 per cent.

Findings

The major findings of this study were as follows:

1. The mean self-concept of the physically handicapped children in this study did not differ appreciably from that of the physically normal children used in Lipsett's (1958) study. She obtained a mean of 86.75, with a standard deviation of 8.18 for the self-concept score, as compared with a mean of 86.18 for the self-concept score with a standard deviation of 12.53 for the physically handicapped children in this study. The difference in standard deviation indicates that the physically handicapped subjects in this study had more variability in their self-concept scores than Lipsett's subjects.

2. The relationship between the self-concept score and the severity of physical handicap was not significant at the 5 per cent level. However, the trend was in the direction hypothesized, with an r of -.2712 between self-concept score and general ability to care for one's needs. (This latter score was indicative of the degree of crippling.)

3. A negative relationship between self-concept score and age of the physically handicapped child was not significant at the 5 per cent level. The negligible relationship
which did exist was in the direction hypothesized.

4. The positive relationship between self-concept score and likeability score on peer rating was rejected at the 5 per cent level. Again the relationship was in the direction hypothesized, with an \( r \) of \(+.1181\).

5. The negative relationship between severity of physical handicap (using general ability scores) and negative peer rating was rejected at the 5 per cent level. This relationship was in the opposite direction hypothesized, with an \( r \) of \(-.2712\). It is interesting to note that of the three measures of physical disability, the general ability score reached a higher level of relationship with total negative peer rating than did those of locomotion and communication.

6. A negative relationship between impairment of ability to communicate and total selection score was rejected at the 5 per cent level.

The failure to support these hypotheses may be due to several factors or a combination of factors. Because of the small number of subjects in this study, the value of \( r \) had to be very high before it reached the 5 per cent level of significance. In this study, with 26 degrees of freedom, \( r \) had to be equal to or greater than the value of \(.374\), and at the .01 per cent level the value of \( r \) had to be equal to or greater than \(.478\). Many of the other self-concept studies quoted in Chapters II and IV had been done on 500 or more subjects, where an \( r \) value of \(.088\) and \(.115\) is considered to be significant at the .05 per
cent and .01 per cent level of confidence.

Another possible reason for the lack of support for the hypotheses could have been the large number of peer nomination items which were omitted by the subjects. Wing (1966) noted also that children in her study responded negatively to about one tenth of the items on the behavior sub-test scales (p. 140). A recapitulation of the responses indicated that these children selected approximately one quarter of the items.

Another factor which could have had a contaminating influence was the negative psychological halo effect which appeared in the P.N.I. score correlations. A closer look at the tables indicates that the negative characteristics, aggression, dependency, withdrawal, depression, were frequently significantly related at the .01 per cent level. It is recognized also that with self-report instruments, one runs the danger of subjects giving socially acceptable answers which further contaminate the results.

The hypotheses developed and tested in this study were based on theories relating to the psychological aspects of physical disability and theories relating to the psychological meaning of self-concept distortion. None of these hypotheses were confirmed at the .05 per cent level of confidence, indicating that this and similar studies should be repeated to develop a pool of data which would substantiate or repudiate these theories. With the small amount of empirical research data available on the physically handicapped, there is no clear-cut agreement among researchers that the physically handicapped child differs
in emotional or social adjustment from the physically normal child, and this study is in agreement with those researchers who have not found that physical handicap inevitably leads to emotional maladjustment (North and Cruickshank, 1954; Kammerer, 1940; Gates, 1946; and Schechter, 1961).

The Limitations of this Study

In considering the findings related above, one should also take into account the several limitations of this study as they relate to samples, research instruments, and design of the study.

The Sample

The sample was considered to be statistically small and consequently required a very high value of r before reaching the .05 per cent level of significance. In addition there was a possibility that it may have been too homogeneous in nature as these children were all rated as being moderately to severely handicapped. However, they did have a dispersion in age range, and from casual inquiries represented a variable socio-economic background.

Research Instruments

The use of pencil and paper tests limits the range of responses. In addition an unknown amount of correlation may be attributed to a common set induced by similar item format and taking the test at a single sitting (Omwake, 1954). Mussen (1960) cites "response set" as a
source of contaminating influence in reports of behavior, especially
when the reports are obtained as responses to a structured question-
naire. But he goes on to say that projective type approaches are by
no means immune to this influence.

There was no direct observation of the respondents' behavior
interaction with their classmates, so that perception of self, for
example, was measured only by Lipsett's Self-Concept Scale. The Peer
Reputation Inventory was similar in nature. Observations of the sub-
jects with their classmates would have given an opportunity to observe
self-perception and peer status. Ratings by teachers and physical
therapists using the Peer Nomination Inventory Scale could have pro-
vided another check on the validity of these instruments.

Self-report instruments such as the Lipsett Self-Concept Scale
do have limitations in their applications. Their successful and valid
utilization is contingent upon the following conditions: (Bloom, 1964,
p. 176).

1. The subject's willingness to cooperate in giving honest
   answers;
2. The subject's feelings of adequacy and freedom from stress;
3. The subject's clarity and depth of self-observation and
   his ability to measure self-differentiation and social
   interaction;
4. The subject's social expectations and the intensity of his
   need to project a positive image.

Despite these recognized limitations of a phenomenological self-
concept instrument, it is Carl Rogers' (1951) contention that the best vantage point for understanding behavior is from the internal reference of the individual himself (p. 494).

**Recommended Changes in Test Instruments**

**Lipsett Self-Concept Scale**

While the author was administering the Lipsett Self-Concept Scale to the subjects she noticed several instances in which the test could be improved. There were six trait descriptive items which were unfamiliar to several of the subjects and had to be explained. This author recommends that in the future these terms be compared with the Thorndike-Lorge Frequency Count (1944) to eliminate those words which are too difficult for this age group.

This test had 19 items which could be considered socially desirable, while only three were considered negative.

This author recommends some other format than that of parallel columns, which encourages the use of stereotype responses. Several subjects chose all of their answers in one of the columns on the continuum, which illustrates the influence of response sets referred to by Loevenger (1959).

**Wiggins and Winder Peer Nomination Inventory Test**

This instrument was difficult to administer to these children because of its length (59 items). Some of the children became fatigued and the author had difficulty maintaining cooperation. In a
few cases, it was necessary to postpone the completion of the test for a short period of time to allow the subject to rest.

The test statements were too inclusive: for example, the subjects sometimes objected to the frequent use of "always" when it referred to a specific action such as "crying", "playing by himself", etc., and for this reason omitted many of these items. The author recommends changing these statements to "usually does...", or "hardly ever...", or "often feels...".

The heavy emphasis on negative trait descriptions of this test interfered with the cooperation of a number of the subjects, for they were reluctant to select this many negative items. As was mentioned previously, many of the items were omitted. Another suggestion would be that since all of the negative categories had 12 items each, the likeability category should have been raised from eight items to 12 items for conformity.

The Physical Disability Rating Scales

This rating scale was devised by the author, but as she continued to use it, it was noted that it should have been more specific to produce conformity in the semantic interpretation by the raters. For example, "communication ability" should probably have read "speaking ability" and "locomotion" been changed to read "ability to walk".

This scale was constructed on a five-point Likert type model for ease of comparing scores with the similarly constructed Lipsett Self-Concept Scale, which was also on a five-point continuum.
However, on this scale, the lower number indicated the least amount of disability, so that a high score indicated a severe disability, but on the Self-Concept Scale, the higher the rating, the better the self-concept. This created confusion in interpreting the sign on the resulting correlations. It would facilitate the interpretation of the results if the numerical rating scale had been reversed.

Limitations of Research Design

In citing the limitations of the research design one is really suggesting further research possibilities.

The major limitation of this research study was the local impossibility of locating control groups of physically normal classes of children with a similar age range. A control group would have provided a more definite test of the hypotheses.

The small number of subjects in this study limits the possibility of obtaining statistically significant results. It is suggested that this study be repeated with an expanded population to explore the extent to which the finding of this investigation would apply to physically handicapped children in a similar setting.

Although the test selected and used in this study did have established validity and reliability, the results of this research would have been more meaningful if validity and reliability could have been established also in this particular instance. A simple method of establishing validity would have been the use of two trained observers to observe the actual behavior of the subjects as they interacted with
their peers, teachers, and physical therapists. Reliability could have been investigated by a test-retest method. However, for some of these children it was a real effort to get through the test once. In addition the testing was not completed until the beginning of summer vacation, and many of the children would have been moving to other groups or to other schools in September, so that a sociometric retest could not have been conducted in the same group setting.

The interpretation of crippled children's test responses is complicated because the tests were designed for and standardized on non-handicapped children. Moreover, the measures involved in personality assessment are not as precise as those used in the evaluation of physical or intellectual status. Tests involving the concept of the self are never conclusive. The results are dependent on the subject's ability to be realistic about himself and the intensity of his need to project a positive socially acceptable image. Another limitation with regard to self-report is the age of these subjects, for they tended to give socially acceptable responses. This pattern was also noted by Sanford et al. (1956), who viewed this as a reflection of the normal course of ego development in children. At the lowest point, there is no capacity to conceptualize one's self; at the mid-point, there is the stereotyped, usually conventional and socially acceptable self-conception; at the highest point, a differentiated and more or less realistic self-concept. The subjects in this study were at the mid-point and tended to give conventional responses.

One limitation of this study which should be made absolutely
clear is with regard to the scores on the Peer Reputation Inventory. These nominations do not reflect actual behavior, but are dependent upon the peer's ability to recall peer behavior and interpret the statement. Therefore, it is not possible to say that a high score on the aggression scale means that the child is necessarily very aggressive. The negative halo effect was noted previously as existing in this test and this too could be a contaminating influence.

Despite these limitations, this study does open up a new avenue of research on the physically handicapped child. To the author's knowledge no other similar studies have been conducted on crippled children who are enrolled in special classes. It is hoped that in the future similar research will add to the findings of this small study.

The results of this exploratory study are in disagreement with that of Smits (1964), who found that the severely physically disabled receive lower ratings from classmates, and that the severely rated adolescent has significantly lower self-concept scores than those whose physical disabilities were mild. Also contrary to the findings in this study are the results of Richardson et al. (1964), whose results showed that physically handicapped boys and girls had a higher proportion of negative statements about themselves which were suggestive of self-depreciation. Both of these latter studies were on children or adolescents who were intermingled with physically normal subjects. As is noted previously, the findings in this study do agree with the consensus of opinion among researchers that there are obviously wide individual differences in reaction to disability, and that no clear-cut
conclusions from the various studies can be reached. Barker et al. (1953) pointed to the chief methodological problems in somato-psychological investigations: selecting representative subjects and securing adequate controls; lack of instruments for measuring physical disability; and the lack of appropriate tests for assessing behavior and personality difficulties as being responsible for the lack of procurement of adequate data on the emotional and social adjustment of the physically handicapped child.

Future research on a larger scale would add to the value of the findings in this present study. Are these results at variance with other research projects because of internal weaknesses, or were they due to the subjects' being in special education classes, associating with peers with whom they could compete and by whom they were accepted? Is it due to the early therapy and counseling which they received and the existence of special equipment which helps them in developing skills? Whatever the reason, the subjects in this study did not show the expected lower self-concept and peer rejection which has been found in other studies on physically disabled subjects. These questions suggest implications for the teacher and counselor of the physically handicapped children and their families.

Implications

Although the findings in this study are not conclusive and the study was exploratory in nature, it does have implications for teachers, counselors, and physical therapists who are working with the physically
handicapped child. It has been suggested throughout the reviewed literature that an understanding of how the child views himself is important in understanding behavior. The use of sociometry in the classroom has been shown to be of value to the teacher in determining the internal social structure of the group and this could be of assistance to her in working with and identifying those who need extra help in developing academic or social skills. It is also generally believed that the development of the self-concept follows well defined stages of growth, as in any other area of development. It has been shown also, that early experiences and interaction with parents are the most important determiners of the child's attitude toward himself. Because of this, counselors working with the physically handicapped child should also work closely with the whole family.

Studies of the emotional and psychological development of the physically handicapped child have indicated that in many instances the parents are either over-protective or rejecting, and that these children tend to be more emotionally maladjusted than could be accounted for by the physical disability. Counselors working with the parents should help them and the child develop a realistic approach to the physical limitations.

In educational circles it has been noted that in recent years the emphasis has been shifting from what the child learns to looking for underlying reasons as to why he does not. Jersild (1952) stresses the importance of understanding the self in relation to the educational program. Jersild presents the view that the most important
contribution that could be made to a person is to help him achieve a realistic concept of himself. The use of the word "realistic" by Jersild implies that one is considered as having a greater or lesser realistic concept of himself in as far as there is an agreement between the subject's self-concept and the observer's report of the subject.

Psychologists sometimes compare the self-concept scores with "ideal self", or the person the subject would like to be, as a means of testing psychological adjustment. They contend that the more alike these scores, the better the adjustment. When a child's view of what he is corresponds quite closely to what he believes he ideally ought to be, he expresses what seems to be a rather comfortable view of himself. When there is a marked difference between the self-picture and the ideal picture, it appears that the child, in his own eyes, is failing to live up to the mark, and he is, in that sense, a self-rejecting person. However, one needs to be very careful in labeling a person "self-accepting" or "self-rejecting", for what a person reports about himself depends on what he is willing to admit and what he is able to recognize as qualities belonging to his make-up.

It seems to this author that the use of self-concept tests and peer nomination inventories, despite their limitations, would provide additional information for those teachers, physical therapists, and counselors working with and understanding the physically handicapped child. There is a need however, to develop standardized tests for use with these individuals. The research study conducted by Buswell (1953) adds relevant data to support this hypothesis. He found that
achievement preceded popularity with peers. This was a longitudinal study in which he procured data on achievement, self-concept and peer evaluations. This brings up the question of cause and effect, for it is believed that self-concept or self-esteem continues to develop throughout a child's life, as well as throughout his adult life. It is generally believed that the parents' attitudes toward the child are the most influential, but school experiences as well as peer groups are also contributing agents. It is suggested that changes in the self-concept can be developed through formal education by learning to see the viewpoints of others, learning to adopt different strategies to accomplish ends.

Teachers are also considered as "significant people" in the child's developing self-concept. Piers (1965) obtained correlations between teacher and peer ratings of .68, a close but not perfect agreement, suggesting that these two groups used different criteria for their judgments. Perhaps, if teachers' perceptions of children differ significantly from those of the peers, they are less effective in communicating with the children, teaching them, and guiding them into particular accomplishments. The development of a self-concept scale with similar categories for teachers and peer rating scales would serve as a cross-reference and help the teacher in identifying her own attitudes or biases which may be interfering with her relations with particular children.

Probably the most important implication resulting from this study was the fact that these physically handicapped children, who were in
special classes, did not show a lower self-concept than physically normal children, and were not rejected by their peers despite a severe physical handicap. This is related to Barbe's (1955) study on the influence of special classes on pupils' social relations. Another by Mann (1956) is of special significance, since it illustrates the use of a sociometric test in evaluation of a special program designed to meet both the academic and social needs of the gifted. In this program, gifted pupils spend half of the school day in regular classes and the other half day in special classes limited to the gifted. It was assumed that such a school program would enable the gifted people to maintain a normal peer relation while obtaining the benefits of special classes. All elementary school children were included in this program of partial segregation, but the study was limited to grades four, five, and six. Results of the sociometric choosing indicated that both the gifted and the typical children give the majority of their sociometric choices to the members of their own group. The sociometric cleavage between the gifted and typical children appeared at all grade levels, indicating that the program of partial segregation did not contribute to normal peer relations as had been intended.

These studies demonstrate the value of sociometric results for testing some of the assumptions concerning the best placement of the exceptional child. For years educators defended the practice of placing the exceptional child in a regular classroom on the basis that this would enable him to maintain normal peer relations. However, the above studies show that the exceptional child may be socially
segregated among his physically normal peers despite the fact that he is physically present in a regular classroom group. When this is related to the physically handicapped child in the normal classroom, studies showed that he was significantly underchosen (Force, 1956) and that the obviousness of this physical handicap was another determining factor (Smits, 1964).

The use of sociometry in evaluating the social relationships of exceptional children is relatively new. Consequently the studies in this area are too few to make any firm generalizations concerning the type of school programs which best meet their social needs. However, the existing studies do indicate that despite the type of educational arrangements made for exceptional children, the sociometric test is a valuable instrument for evaluating influence of the school programs on their social relationships. As was mentioned earlier, it seemed to this author that there was an unusually close social relationship among the children in these physically handicapped classes. Perhaps this was due to their having a common frame of reference, and an opportunity to express feelings about their own and others' liabilities, suggestions on how to change what they dislike about themselves and opportunities to try different behavior. Perhaps their counselors, physical therapists, and teachers could collaborate on methods of helping these children develop greater awareness of others, perceptions of them, and to learn how to modify their own behavior.
Conclusion

In summary, this investigation conducted with physically handicapped subjects in special classes for the disabled indicated that their self-concept scores were not significantly influenced by the presence of a serious neuro-motor disability. In attempting to draw conclusions about the effects of peer interactions upon self-concept, it appears equally likely that self-concept affects interactions with one's peers, for it was noted that the peer reputation scores had no significant relation to the degree of disability. Although literature suggests that such factors as body-image, or physical appearance and capabilities, intellectual ability, and achievements affect the self-concept, its development is most dependent upon and concomitant with the child's interaction with his parents and other significant persons. Perhaps the lack of agreement among the findings of researchers on the effects of a physical disability and a child's social and emotional adjustment could be summarized by reference to Alfred Adler's theory which states "the life style of each individual is not only influenced by the disability, but in turn determines the final effect of any physical disability" (Dreikurs, 1948, p. 50).

On the basis of this study, suggestions were made for the use of self-concept and peer nomination scores by counselors, teachers, and physical therapists working with the physically handicapped child. Suggestions were made for further research and for improvements in the instruments used in this study. It is hoped that the findings of this
study and the theoretical questions raised will generate additional research leading to the clarification of the effect of the physical handicap on the developing self-concept and peer reputation, plus the effect of early therapy, counseling, and special education classes.
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APPENDIX A

THE SELF-CONCEPT SCALE

The self-concept scale consists of 22 statements which are followed by a self-rating scale on a five point continuum, indicating the degree to which the child believes he possesses the listed trait. A copy of the test is shown on a following page of this appendix.

The instructions for administration of the self-concept scale were as follows:

Please make your judgments on the basis of how you think you REALLY ARE on the various traits. There is no right or wrong answer as everybody is different. Just mark the space which you think most accurately describes you. For example, let's look at the first line. It says, "I am friendly." There are five spaces after it; above each space is a statement as to the degree that you think you are friendly. If you think you are "not friendly at all", put a mark in the first space. If you think you are "not often very friendly", put a mark in the second space and so on. Choose only ONE space after each statement and be sure to do all of the 22 statements. Don't forget to put your name on the paper.

Scoring Procedure

The scores on the self-concept scales were weighed from 1 to 5 on the positive traits and 5 to 1 on the negative traits:

<table>
<thead>
<tr>
<th>Positive Statement:</th>
<th>Not at all</th>
<th>Not very often</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Negative Statement:</td>
<td>(5)</td>
<td>(4)</td>
<td>(3)</td>
<td>(2)</td>
<td>(1)</td>
</tr>
</tbody>
</table>

The scores were obtained by summing the child's rating. Lower scores were presumed to reflect degree of self-disparagement.
SELF-CONCEPT SCALE

Instructions: Make an "X" in ONE space after each statement. There is no right or wrong answer so choose the one which you think describes you most accurately.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>Not very often</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am friendly</td>
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<td>2. I am happy</td>
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<td>3. I am kind</td>
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<td>4. I am brave</td>
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<td>5. I am honest</td>
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<td>6. I am obedient</td>
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<td>7. I am likeable</td>
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<td>8. I am trusted</td>
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<td>9. I am good</td>
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<td>10. I am proud</td>
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<td>11. I am lazy</td>
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<td>12. I am helpful</td>
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<td>13. I am loyal</td>
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<td>14. I am cooperative</td>
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<td>15. I am cheerful</td>
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<td>16. I am thoughtful</td>
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<td>17. I am popular</td>
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<td>18. I am courteous</td>
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<td>19. I am jealous</td>
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<td>20. I am polite</td>
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<td>21. I am bashful</td>
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<td>22. I am clean</td>
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APPENDIX B

COMMUNICATION AND PHYSICAL DISABILITY RATING FORM

CHILD'S NAME________________________ AGE_________
RATED BY:________________________ POSITION_______

Please check the statements which you think apply to the child being rated.
(One only in each area).

COMMUNICATION

1. No difficulty at all, speech is easily understood.
2. Slight difficulty, apparent to the trained worker, not to the layman.
3. Moderate difficulty; can use short sentences but difficult to understand.
4. Severe difficulty; habitually uses one or two words only, difficult to understand.
5. Cannot speak but usually gestures or points.

LOCOMOTION

1. No apparent or reported difficulty in this area.
2. A little restriction but not enough to warrant special help.
3. Can get around on crutches without much difficulty.
4. Uses crutches but does so with difficulty and at a very slow pace.
5. Uses wheel chair.

ABILITIES

1. Little restriction in normal abilities, namely, can handle own personal care, eat, put on clothes, speaks clearly, writes or uses typewriter.
2. Moderate restriction in one of the above mentioned areas.
3. Moderate restriction in two or more of the above mentioned areas.
4. Severely restricted in one of the above mentioned areas.
5. Severely restricted in two or more of the above mentioned areas.
APPENDIX C

PEER NOMINATION INVENTORY SCALE (WIGGINS AND WINDER, 1961)

The Peer Nomination Inventory Test consists of items by peer matrix in which the statements (items) appear as rows down the left-hand side of the page and the names of the students in the class are printed across the top of the page.

It is believed that this form of test format will stimulate the subjects to consider the possible applicability of each item to each classmate. The author read each statement aloud to the students and then read across the names slowly (this was necessary as some of the children read very poorly.) They were told that although the sentences were constructed as referring to a boy, if the choice was a girl, to substitute "she" for "he"; for example, "she was absent from school a lot."

The instructions for the individual administration of the P.N.I. were as follows. The author spoke briefly to the class as a whole explaining that this was a research project being conducted in several schools. Then they were told:

"We have seen students do many different things, now we want to know how many kids here do the same sort of things, so we have written down a lot of things kids do. Check which students in your class do these things. You can just guess the best you can."

Following this, the boys and girls were instructed to draw a line through their own name all the way down the column on each page, for they were not to describe themselves on this inventory.
The students were then told:

"Now turn to the first page. See the first statement? After number one, it says, "he is absent from school a lot." Now look across the names. Who is absent from school a lot? Put a check mark under his or her name. Who else is absent from school a lot? Put a check mark under his or her name. Put a check mark under the name of everyone who is absent from school a lot. Now look at number two. After number two it says, "he is pretty short." If a student is pretty short, put a check mark under his or her name. Do this for all the statements for everyone to whom you think that statement would apply."

The scoring procedures for the P.N.I. were to check the intensity scoring by tabulating the number of raters who nominated the subject on a given item. This raw score may range from zero to one less than the total number of raters present (n - 1), for subjects did not rate themselves.

P.N.I. Variable Scales

A. Aggression: 9, 11, 23, 25, 26, 28, 35, 36, 38, 40, 45, 57
B. Dependency: 12, 17, 19, 21, 29, 31, 37, 42, 44, 47, 49, 55
C. Withdrawal: 4, 5, 6, 7, 9, 18, 33, 41, 46, 50, 53, 56
D. Depression: 10, 13, 14, 16, 22, 27, 32, 34, 39, 48, 51, 52
E. Likeability: 15, 20, 24, 30, 43, 54, 58, 59

The Peer Nomination Inventory Scale used in this study was identical to that devised by Wiggins and Winder (1961) except for the dropping of three filler items which were not applicable to physically handicapped children. Wiggins and Winder state that with the exception of the three beginning filler items and the two likeability items placed at the end for "closing rapport", item order was determined from a table of random numbers.
INSTRUCTIONS: If the student is a girl, substitute "She" for "He" in the statement. Put a "X" in the space under the names of the students you choose.

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<tr>
<td>1. He's absent from school a lot.</td>
<td>Dick</td>
<td>David</td>
<td>Donna</td>
<td>Craig</td>
<td>JoAnn</td>
<td>Judy</td>
<td>Ross</td>
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<td>2. He's pretty short.</td>
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<td>3. He's always losing things.</td>
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<td>4. He will always play by himself.</td>
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<td>5. No one plays with him.</td>
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<td>6. He's not interested in anything.</td>
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<td>7. He does not play.</td>
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<td>8. He's always acting up.</td>
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<td>9. He is sort of ignored.</td>
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<td>10. Someone makes fun of him and he starts crying.</td>
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<td>11. When he doesn't get his own way, he gets real mad.</td>
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<td>12. He likes an audience all the time.</td>
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<td>13. He cries if you hurt his feelings.</td>
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<td>14. He cries when he doesn't do something right.</td>
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<td>15. He has lots of friends.</td>
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<td>16. No matter what he does, it's wrong.</td>
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<td>17. He feels a lack of attention.</td>
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<td>18. Hardly anybody likes to play with him</td>
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<td>19. He needs attention very badly.</td>
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20. He is one of the kids I like

21. He talks to the teacher all the time.

22. He's a little too sensitive to everybody.

23. If someone gets in his way, he shoves them out of the way.

24. He's the kind of kid I like.

25. He's just plain mean.

26. He's really wild.

27. He feels left out.

28. He makes fun of people.

29. He's trying hard to get popular.

30. He's a good friend of mine.

31. He's always playing the clown and wants everybody to laugh at him.

32. He's not sure of himself in anything.

33. He doesn't want to play.

34. He says he can't do things.

35. He doesn't pay attention to the teacher.

36. He seems to have a chip on his shoulder.

37. He wants everything done for him.

38. He tries to get other people in trouble.

39. He cries when he doesn't know how to play.

40. He always messes around and gets in trouble.

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<td>26. He's really wild.</td>
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<td>27. He feels left out.</td>
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<td>32. He's not sure of himself in anything.</td>
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<td>34. He says he can't do things.</td>
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<td>35. He doesn't pay attention to the teacher.</td>
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