A STUDY OF AGE DIFFERENCES AND SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN SELF-CONCEPT AND GRADE-POINT AVERAGE

by

Max Bruck

AN ABSTRACT

Submitted to the School for Advanced Graduate Studies of
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Foundations of Education

1957

Approved 

The purpose of this study was to investigate the age differences and sex differences in the relationship between self-concept and grade-point average. Two major hypotheses were formulated: (1) The relationship between self-concept and grade-point average increases in magnitude with an increase in age; and (2) Sex differences in the relationship between self-concept and grade-point average will vary according to age. As an outgrowth of the latter major hypothesis, it was further hypothesized that (a) on the third grade level the relationship between self-concept and grade-point average will be greater for the male; (b) on the sixth grade level the relationship between self-concept and grade-point average will tend to be equal; and (c) on the eleventh grade level the relationship between self-concept and grade-point average tends to be equal for both boys and girls.

It was theorized that the self-concept evolves through the interaction of internal and external stimuli employing the processes of imitation, incorporation, and identification. These processes, which were initially motivated to allay anxieties, become the processes through which the infant acquired (learns) modes of adaptation. Since learning is viewed as an adaptation to personal and socio-cultural demands, these processes become the prototype for all learning that is to follow. Any interference with mature self-concept development will, therefore, be reflected in disturbed and/or

arrested, learning processes with resultant learning problems in the formal school situation.

A review of the literature revealed no studies on the problem under consideration, nor any studies indirectly related to the problem of self-concept and grade-point average. The self has, in fact, only recently become an object of scientific inquiry. By and large, the literature has dealt with non-emotional factors in learning. Literature that dealt with personality and learning tended to concern itself with the composite personality organization of the child, and, in the main, these were not tied in with the learning process. Studies on sex differences had only an indirect bearing on the problem. While sex differences have been investigated for almost every variable, sex differences in scholastic achievement were selected as the area nearest to the problem being investigated.

The instrument selected to measure self-concept was the Machover Draw-A-Person (SCS-DAP) Test which was adapted and validated with a pilot group.

The investigation of the major problem included a research group of 300 subjects, evenly divided between the sexes from the third and sixth grades of three public elementary schools and from the eleventh grade of a senior high school in Flint, Michigan. The SCS-DAP was administered to these subjects in their classrooms, the grade-point averages were calculated and the relationship between these variables determined. The significance of the relationships

and the significance of differences between the relationships were calculated. The following conclusions were derived from this investigation.

1. A positive and significant relationship exists between self-concept and grade-point average on all grade levels ranging from the one to the five per cent level of confidence.

2. There are significant age differences in the relationship between self-concept and grade point achievement when one compares early elementary and senior high students and later elementary and senior high students, but there is no significant age difference in this relationship between early and late elementary school subjects.

3. There are significant sex differences when one compares early elementary pupils and also senior high school pupils, but there is no significant sex difference in this relationship when one compares later elementary school pupils.

A STUDY OF AGE DIFFERENCES AND SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN SELF-CONCEPT AND GRADE-POINT AVERAGE

by

Max Bruck

A DISSERTATION

Submitted to the School for Advanced Graduate Studies of
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Foundations of Education

1957

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

For some time now, educators, psychologists, social workers and psychoanalysts have been impressed with the consistency with which the self-concept of the child proved to be an indication of his personality maturation and of the nature of his adaptation to his total environment. Furthermore, the self-concept of the child appeared to be a most consistent indicator, not only of his current adaptation, but also of his potential adaptability, providing, of course, that the child's total situation remained the same. When considering the child's adaptation to his environment, the consistency with which the relationship appeared between the nature of the child's self-concept and his school adjustment has been noted. Stimulated by these observations to further investigate this problem, the present study attempted to evaluate the age differences and sex differences in the relationship between the self-concept of the child and his grade-point average.

Statement of the Problem

The purpose of this study is to investigate age differences and sex differences in the relationship between self-concept and grade-point average. Two major hypotheses are formulated and tested.

1. The relationship between self-concept and grade-point average increases in magnitude with an increase in age.
2. Sex differences in the relationship between self-concept and grade-point average will vary according to age.

As an outgrowth of the latter major hypothesis, it is further hypothesized that:

a. On the third-grade level the relationship between self-concept and grade-point average is greater for the male.
b. On the sixth-grade level the relationship between self-concept and grade-point average tends to be equal.
c. On the eleventh-grade level the relationship between self-concept and grade-point average tends to be equal.

The concept of self has come only lately to be recognized as a significant topic for psychological research and inquiry. Social psychologists in particular have recognized the self as a concept and have devoted considerable attention to it. It is now commonly accepted that the self is essentially composed of a constellation of attitudes that are learned through dynamic interaction with the total environment as perceived and interpreted by the individual.

The development of the self is said by many to begin with the trauma of the birth process itself. The child starts

as amorphous mass that feels itself to include its total environment. It then proceeds with sorting itself from all that which is not self. Sensations within the body and stimuli from the external world force the infant to begin to perceive the external world as progressively more important in order to essential gratifications. In this early process of differentiation, perception plays a crucial part, for it is through perception that the infant gradually learns that he cannot always control the source of his gratification. The temporary experiencing of internal stimuli forces on the infant the initially vague realization that something has to be done by something external to itself to relieve its inner discomfort. As the infant thus begins to direct his attention for gratification towards objects outside of itself, psychological boundaries between itself and the environment become progressively more distinct. Further, as the infant begins to differentiate his mother as a distinct object from himself, vague notions about himself develop as it comes to feel itself separate from others. Shilder [59:126]* and others have stressed the importance of the body image in the development of the self and have emphasized how the child's perception of its own body becomes the nucleus of awareness of the self. Perceptions of the body emerge only gradually and as

---

*Number preceding the colon refer to the bibliographical entry. Those numbers after colon refer to page, or pages, of entry.

these become more distinct, feelings about the body become more distinct and differentiated also. Tactile stimulation and inner sensory perception occurring simultaneously are particularly important in the differentiation of the self from other objects and, according to Symonds[65:66], "The sense of self proceeds largely from an increasing differentiation and localization of body experience."

Psychologists, psychoanalysts, social anthropologists, and educators have written much on the development of self showing the importance of socio-cultural influences. The attitudes and values that comprise the self are largely those that the emerging self has begun to differentiate out of the responses and expectations of the adults in his immediate environment. When the mother as the chief source of gratification becomes a differentiated percept, the infant in his helplessness begins to fear the loss of the object and with it his ability to have his feelings of discomfort relieved. In order to protect his vague and helpless emerging self from the fear of object loss, he resorts to the distortion that he and his mother are not separated at all but are one and the same and because of this he begins to imitate her. Since the focal point for gratification during this period of development is the oral zone, the infant attempts to incorporate her. The importance of this act of imitation and incorporation lies in the fact that it serves as the prototype for all learning that is to follow. Incorporation combined with imitation is the psychic process

that leads to identification. The process of incorporation and identification that served in this way to allay the infant's fears about being deserted by his mother becomes the process through which the infant acquires behavior, including skills, attitudes, and values, that will serve to determine his developing self. The importance of the perceptual system and its relationship to the learning process thus becomes apparent. Any interference with the development of the process of perception, differentiation, imitation, incorporation or identification, such as appears as a result of projection, inconsistency, excessive indulgence, conflict, deprivation, etc., will run the risk of retarding, arresting, inhibiting, or otherwise interfering with the learning process. To this extent the normal development of the self will be blocked and learning problems in the school situation may follow.

Many social scientists agree that the conception of self is dependent upon the roles taken by significant adults in relation to the infant, as well as by their expectations of his own behavior. The quality of the concept of the self is acquired (learned) through the incorporation of attitudes, values and expectations of others. It is in this way that the child comes to identify himself as part of a particular constellation of values through which he comes to define his own role and status. With growth and maturation the child gradually organizes and integrates these roles into a concept and feeling of self. Group consciousness and group

identifications are necessary for further developing and broadening the concept of self. As he perceives the various elements in his environment, the child further "takes in," or incorporates and identifies himself with attitudes, values, and expectations that characterize his environment and these will become an integral part of his self-concept, self-evaluation, and self-judgment.

Finding that he is accepted as a member of the significant group in his environment, he begins to feel progressively more secure in his adjustments and begins to conceive of his developed self as having a definite place within the structure of his psychological environment. When there is consistency between roles established in the past and role expectations in the newer situation, the integration of behavior will be facilitated. On the other hand, new values frequently become upsetting to the self as these call for new behavior. It does become evident that learning in the school situation will be a reflection of the child's already reciprocally conditioned(learned) self-concept and the classroom will become the locale for the preservation of his previously learned behavior pattern. As the child seeks to find security (love) in terms of his self-concept in the new setting of the school it will be fundamental to the preservation of the integrity of the self that he experience personal and social status and respect through a feeling of having done well. And as the child progresses in school, his self-concept becomes better integrated with the role

expectations of others. Along with this integration he develops a better ability to direct his psychic energies in gradually more impersonal pursuits, to better sustain his attention, to better control his impulses including his negative attitudes, to accept, if only on an intellectual level, adult expectations, to better organize his study habits and to achieve a better organization of his intelligence. In short, as the child with a mature self-concept becomes older he is able to channelize his psychic energies in such a way that he is better able to attack the learning situation.

The child with a less mature self-concept experiences greater difficulty in concentrating his psychic energy on the solution of abstract concepts. From this followed the first major hypothesis of this study.

An overview of American culture, especially from the point of view of social science theory, suggests concepts of "masculinity" and/or "femininity." Observation makes it apparent that in our culture, motor activity and masculinity become sex linked. For the boy, "muscle," "toughness," "activity," "independence," and many other such adjectives are given emphasis and pride. This is particularly true during the pre-school years. In contrast, conformity, docility, sublimation, repression, "femininity" in addition to many other similar expectations are held for the pre-school girl. As discussed earlier, at the time of school entrance these concepts have already become part of the frame of reference for his self-concept.

It is therefore theorized that, especially during the early elementary school years, the boy will be younger (or less mature) than girls in the adaptive patterns necessary for acquiring school subject matter, but older in the adaptive patterns necessary for gross muscular learning processes. This is not to say that boys will be younger in all areas, but that they have not acquired to the same extent as their female counterparts that concept of self which is so necessary for equal grade-point accomplishment. However, in the areas wherein his adaptive strengths lie (gross muscular activity) he is more mature than his female counterpart. Scheinfeld [56:115], Anastasi and Foley [1:85] in their summarizing of research data, and Gesell and his associates [23:85] of the Yale Clinic of Child Development, among many others, make the same point of noting significant sex differences in the play activities of young children during their pre-school years and noted the advance of boys over girls in locomotor development while the girls engaged in more sedentary activity that involved finer hand motions.

It is generally agreed that because of the self-concept the female pupil has acquired at the time of school entrance, she continues to find satisfaction in school accomplishment which brings her approval (security) from teachers. Scheinfeld [56:89], and Anastasi and Foley [1:661] developed this point as they reported that with regard to school progress girls are more consistently successful than boys irrespective of the particular criterion of school

progress employed. The transition from home to school is facilitated as both are, by and large, characterized by strong maternal influence and associations. In addition, the female experiences less disparity in the role expectations in the home and in the school than the male. The availability of models for imitation, incorporation, and identification, provides for further enhancement of the self-concept of the girl and thus tends to serve her as a more consistently effective source of security. Blair and Burton [8:40] wrote of the efforts of the child to identify himself with his own sexual role in society and how "boys deeply resent having feminine characteristics attributed to them." Blair and Burton [8:111-112] specifically pointed out that in the school milieu close and intimate contact with males is often not available to the male pupil which in later childhood results in a possible cause for a pattern of resistance to the strong maternal influence that dominates both home and school.

The problem is considerably more complicated for the male pupil. In addition to being younger than his female counterparts at the time of school entrance in the adaptive patterns (behavior) necessary for acquiring school subject matter, he continues to find himself in a milieu where both home guidance and adult association remain predominantly feminine. Close contact with men is often not available to him and it appears that all through his childhood years until adolescence, the adults with whom he associates are

mainly women, whom, however, he cannot take as models for identification. However, having developed his self-concept and resultant adaptive patterns in response to the particular frame of reference of "masculine" values, attitudes, and role expectations that he has, which have rewarded him with a certain measure of security (love), he finds that these very percepts tend to be in opposition to patterns of behavior, thinking and feeling that are now expected of him in the school milieu. To the extent that this is true, the early elementary boy finds the new values and role expectations threatening to the continuity of his concept of self. His difficulties are compounded by the unequal competition between himself and his female counterpart who is better prepared in the academic situation for winning constructive and warm recognition (security) from female teachers. Under these circumstances, it is to be expected that anxiety and discomfrot will be aroused in the male pupil and that under the pressure of striving to protect the unity and esteem of his self, he would tend to resort to patterns of aggressive behavior that have been in the past encouraged and have been successful for him in meeting his security needs. Compensation for feelings of inadequacy accentuate his aggressive behavior still further. Lacking appropriate models for identification he tends to fall back upon close and interdependent relationships with other boys like himself which will offer him a feeling of unity with his own sex. Under pressure to behave differently from girls to

prove they are boys, the absence of models for identification leaves them floundering for socially acceptable conduct patterns that will be in keeping with the symbols of self-value that they have internalized. Searching for percepts that are in harmony with those previously integrated, they tend to reject the newer self-values and this holds particularly for those qualities that are associated with femininity. Thus, they engage in behavior that especially to the female teacher appears all the way from being mildly annoying to anti-social. All this, of course, sets a kind of "snow-balling operation" in motion. The more aggressive the boys behave, the more he tends to run into rejection from his teacher. And, as is well known, teachers' marks which unconsciously reflect a composite of values, judgment, and even biases, are particularly sensitive to the male child's compensatory self-protective behavior. The impact of all of this on the self-concept of the male pupil tends to render him less secure, less valued, and less stable. This is not to say, however, that all boys at the time of school entrance will have a less stable, less mature, or less healthy self-concept. Neither is it implied that all boys with a poorer self-concept will do less well academically than their female counterparts for it is well known that many other factors in addition to the nature of the self-concept will influence a given child's grade-point attainment. What is apparent, however, is that the male with a relatively healthy self-concept is more able to be

flexible in his adaptability than the male with a relatively poor self-concept and would therefore be better able to accommodate himself to the role expectations in school. At the same time, the same expectations for the boy with an already immature self-concept at the time of school entrance creates an additional burden that will lead to the compensatory behavior already described. For this kind of child, perceptions that are in opposition to the self-concept tend to be rejected and repressed and psychic energy that might otherwise be in the service of the developing intelligence and other personality potentialities is diverted. It follows, with the self being the primary value that it is, threats to its integrity and unity arouse anxiety that, in the absence of other defenses that will come on the scene only later, will affect its integrative character. As a result, the child's ability to adapt, to learn, to incorporate will be diminished and/or inhibited. This is so because threats to the self are experienced with such pervading anxiety as to affect the integrative character of the self and thereby regressive trends to an earlier level of self-concept development are aroused together with their activation of aggressivity, now however, strengthened by compensatory features.

Self-concept, however, is viewed as a developmental phenomenon. While the formal school requirements posed a greater threat to the self-concept of the early elementary male pupil, he is nevertheless aware that socio-cultural

expectations do require him to adjust, but this adjustment is based on the relative maturity of his self-concept. As he continues in school, however, he learns that in order to achieve gratification he must adjust regardless of his self-concept needs. He, therefore, comes to rely more and more on intellectual controls in the service of gaining the essential security needs and at the same time represses his immature self-concept needs and compensatory aggressivity. Thus, the male child begins to achieve in school in some relationship to his educational capacities.

This adjustive process continues throughout the elementary school life of the male pupil, gaining in magnitude during the latency period with its better crystallization of defense mechanisms until the onset of adolescence. At this time, with the revival of earlier conflicts and the shattering of previously effective defenses, the adjustive process is disrupted. Girls, of course, are also subjected to the same process, but because of their role expectations in school being more consistent with those at home and society in general, their self-concept and grades are not as severely affected at any age level. Although both sexes experience the adolescent stress, both have by now acquired reliance on personality factors, other than self-concept, to obtain grades and these grades will not suffer as much as self-concept.

From the above discussion followed the second major hypothesis of this study.

Definitions of Terms Used

Self-concept. For the purpose of the clinician in evaluating the self-concept in the validating study the following definition was used: the self-concept is composed of these elements; (1) self-confidence, (2) freedom to express appropriate feelings, (3) liking for oneself, (4) satisfaction with one's attainments, and (5) feeling of personal appreciation by others.

Grade-point average. Grade-point average is defined as the average of the pupil's marks for the given year under investigation by converting their grades according to the following scheme:

A = 4
B = 3
C = 2
D = 1
E = 0

Age difference. For the purpose of this study, age differences refer to those differences as shown between grade levels.

Limitations of the Study

The validating procedure for the SCS-DAP is vulnerable to criticism. The standard deviation of the SCS-DAP reflected relatively little dispersion of scores and it can be said this was related to the homogeneity of the pilot group, all of whom were referrals to a child guidance clinic. Although it can be argued that an instrument that discriminated

between a homogeneous population would discriminate even more effectively in a heterogenous population, in view of the "normal" population of the research group it must be granted that to have validated the SCS-DAP on a group identical with the research group would have been a methodological improvement.

The external criteria for the validation of the SCS-DAP, a rating scale for self-concept that was completed by a trained clinician, is also vulnerable to criticism. Any rating scale, of course, is subject to error due to the subjectivity of the rater. However, in this case, the rater was a trained person in the evaluation of self-concept and the significant relationship between the rating scale (JRS) and SCS-DAP attested to this. In any case, the determination of reliability of the SCS-DAP and its still further refinement is warranted.

CHAPTER II

REVIEW OF THE LITERATURE

Self-Concept and Personality Factors in Learning

An overview of the social science literature revealed that there exists a considerable body of literature in the field of learning and personality. However, upon further investigation, it became clear that by far the greatest quantity of this literature dealt with non-emotional factors in learning. Furthermore, the literature revealed that, by and large, research and theoretical works have concerned themselves with the composite personality organization of the child rather than studying the constituent elements of the personality organization. It is not surprising, therefore, that the self, representing one of these elements in the organization of the personality, has only very recently become a recognized topic for reputable consideration and scientific inquiry. In general, social psychologists and psychoanalysts have been the only groups of social scientists who have recognized the self and have devoted attention to it. The work of Murphy, Murphy, and Newcomb [50:152], Symonds [65:62-133], and the recent work by Sherif and Cantrill [57:156] reflected a growing interest in the self. However, in evaluating the voluminous discussions in the literature in relation to the problem under investigation,

it became apparent that the child is generally regarded as a "segmented" concept and this is particularly true with respect to educational problems. Psychiatric literature, in particular, while often either implying or stating directly that the teaching process does not include the whole child, committed a like failure in not communicating to educators in just what way the learning process is related to the emotional construct of the growing child. Anderson [2:74], in briefly touching on the purposes of the area of child development as a scientific field to coordinate the findings of research in the social science specialties, states:

> . . . . In recent years, hundreds of studies involving observations and experiments on children of all ages have been made. This vast and growing scientific literature, with its many implications for education, very much needs interpretation. . . . for childhood education. . . .

This problem is particularly relevant to the concept of self and its relation to the learning process, an area that until now has almost been entirely neglected by scientific inquiry. Liss [43:102] made a pointed, although brief, reference to the relationship between self-concept and learning when he wrote:

> Learning in early infancy is a constant physiologic interchange between the adult and the infant. Into this experience are woven the reaction of the environment to the infant's early physiologic interests, which in the beginning are commendable, but which with time have to be repressed and sublimated. This is the basis for the necessary phychic sublimation of early physiological practices, such as food intake and body disposition of incorporated material. The first learning problem is centered around the body or self, for its actual existence is dependent upon the satisfaction, directly or through substitutes, of

> these survival urges. The compromise of self in relation to others comes only with time, when the psyche is able to differentiate between extrinsic and intrinsic phenomena, and when the infant is able to grasp the difference between the self and all that is not self . . . .

Symonds [65:183], in discussing that the main task of education should be concerned with helping individuals to change from dependence on others to dependence on one's own efforts, decisions and controls, stressed the importance of the development of the ego and the self. She stated:

> 'The development of the self is equally important to the development of the ego. It has been pointed out that effective ego development is in part conditioned by the adequate perception and conception of the self. Other things being equal, the more self-confidence and self-esteem a child possesses, the more effective will be his learning and his adjustment. Therefore, education must be concerned with helping children to form positive and constructive self feelings and self evaluations.'

Pearson [53:96], in a recent work, implied a relationship between the development of the self and the learning process. His volume, however, remains primarily a theoretical discussion of the relationship between the contributions to education made by psychoanalysts and those made by educators and educational psychologists. The concept of self, as an object of inquiry, and more particularly, its relationship to scholastic achievement, is not discussed.

Pearson, like many Freudians, dealt with the self in practice. In theory, they merely indicated how it is formed and suggested that it has an influence, even a profound influence, but as an organizing and integrating pattern apart from the quite general "person," the self is omitted

from even theoretical consideration. In this connection, Munroe [49:461], using self-image in the same sense as self-concept, in a very recent work wrote:

> . . . I strongly suggested the need for study of the self image as an "institution" of enormous power, at least in our culture, which should be distinguished from the super-ego as defined by Freud and from the overly broad Freudian concept of the ego. . . .

In the same work Munroe [49:104-105] continued her discussion of the Freudian neglect of the self:

> . . . To be blunt, there is very little talk about the self as an operating entity in any brand of "Freudian" literature. This statement may sound like a critical comment, but I think it may be considered essentially an item of reporting. Freud and Freudians, especially the ego psychologists, show how the "self" comes about. They deal with it in practice as any good therapist would. But they seem to have been so busy avoiding naive ideas of the "self" in favor of studying the major functions that they have neglected the tremendous power of the synthesis performed by the ego. . . .

As indicated earlier, there are no studies reported in the literature concerning the relationship between self-concept and grade-point attainment. The relationship, however, between the development of self and learning is not disputed in the literature. Writers on the development of the self-concept agree that the development of the self is inseparable from learning. While the various schools of thought by no means concur on how the self develops, there is agreement that the self is a "learned" product. Sherif and Cantrill [58:156], using ego development in the same sense as "self-development" in their review of the voluminous literature on ego (self) development, wrote:

> The more we study, the more we find the ego (the self) consists mainly of those attitudes formed during the course of genetic development. . . as attitudes are formed in the course of genetic development, the ego is formed. Starting with the delimitation of one's own body from surrounding objects, ego formation readily expands by the learning of attitudes related to it (ego attitudes), particularly after the acquisition of communicable language. . . . Ego formation is not a mystic process. It can be readily detected in the behavior of the growing child. The social development a child has attained by the time he reaches school age is not the result of an automatic blossoming forth of some inherent natural endowment. . .

Blanchard's work [9:550-563], particularly her study of reading disabilities, gave impetus to a study of the child's environment, especially his primary relationships, as an approach toward understanding some of his learning difficulties. Subsequently, several other articles, especially of psychiatric and psychoanalytic thought, appeared in the literature strongly supportive of Blanchard's "environmentalism" and, in turn, contributed several theoretical works as based on clinical case studies toward an understanding of the child's learning difficulties. These works, in particular, stressed disturbed relationships with parents and singled out "rejecting parents" as a particularly potent factor in educational disabilities. In one of his earlier articles Liss [39:126-131] wrote:

> Where the ungratified parent-child relationship is highly charged and the educational techniques have been taken over by these parents, the subject material is colored by this hostility and it confused the entire learning process because of its latent social antecedent condition. ... . The sibling status is similarly influenced. Only through security previously attained through experiment with the other siblings can the child amiably share subject matter and activity with contemporaries.

In subsequent articles Liss [40:123-218] [41:483-488] again stressed the reciprocal biological and emotional factors in the learning process as these are carried into the classroom. In his latest article Liss [43:105] stressed:

> Learning is conditioned by parent-child relationships. The earlier relationships condition the subsequent teacher-student pattern for good or evil when the problem is no longer body action, but discrimination or substitutes for physiologic satisfaction which we call sublimations.

Again, Liss [42:343-348] wrote:

> One must understand that the nuclear conflict in learning is a perpetual attempt of sublimation of the individual's drives. Therefore, in major disturbances of the learning process, the genesis of that conflict is in the early biological area around which learning is centered. In ratio to the individual's acceptance or rejection of the limitations set down by society upon his body interests, is he able to accept or reject the subsequent learning structure which is built upon these early experiments.

Liss, of course, bases his conclusions on Freudian theory of personality development. Writing in the same vein, Mahler [46:44] stated:

> Education, from the simplest gradual domestication and training of the infant up to the learning of skills and high scholastic achievements, can be compared with the continual barter in which the child is brought to give up infantile, egoistic and increasingly unacceptable, immature and objectional behavior in return for tangible or intangible premiums, symbolizing love.

Several studies have concerned themselves with examining the effects of early emotional deprivations on the child's intellectual functioning. Goldfarb [25:151], Bender [5:27], and Spitz [61:623] were particularly interested in evaluating the effects upon children of growing up in institutions and

in foster homes. Goldfarb stated that the effect of an institutional milieu in contrast to foster parents results in retarded intellectual development. "The trend is clear for the total group: 42.5 per cent of all the institution children are experiencing educational difficulty in contrast to 15 per cent of the total foster home group."

In summarizing her own clinical experience and the literature on early emotional deprivation of children in institutional settings and their pre-school experiences, Bender wrote:

> Children who have been cared for in the institution during infancy. . . were inferior in all intellectual fields, in all personality traits and all capacities for social adjustment. In these fields of personality which are the more closely related to socialization, language development and abstract thinking, the defect was more serious than even in defective children.

It appears that studies such as these point up the need for further investigation of personality sectors that have an influence on the child's intellectual and other functioning. An important area for future research thus suggests itself in the study of early or primary deprivation and its differential effects on personality adjustment.

In recent years psychologists and educators have tended to regard the majority of children who seem to have difficulty in learning their school work as suffering from problems that range all the way from severely neurotic difficulties to relatively more mild "situational" difficulties. For this reason, many of these children have been referred to child psychologists, child psychiatrists, and child

psychoanalysts. According to Liss [39:126-131], "This is a step in the right direction." He stated:

> . . . . every child who shows any form of steeple-like or valley-like learning patterns requires an evaluation by a psychoanalyst. . . .

In the same article he emphasized, however:

> It is important that those psychoanalysts who specialize in the psychoanalysis of children have a broad knowledge of the factors which may produce such problems and of how they may be cured.

Attention in the literature has only lately been centered on the development of the ego with its implications for the learning process. French [17:6-8], for example, is typical of several writers who make reference to ego functions and ego adaptation as these are related to the general problem of adjustment. French is especially concerned with the problem of goal achievement, but again falls short of tying in his discussion on ego function with the learning process and with education generally.

In his later work [17:3-4] French was again concerned with an analysis of the process of integration of behavior out of its more elementary component patterns. He proposed to study intensively the many problems passed over by dynamic psychology beginning with the "common-sense assumption" that all human behavior is "goal-directed," which he also viewed as "learning activities." French [17:56-57] remarked that ". . . excessive motivating pressure tends to disintegrate the patterns of goal-directed behavior." He discussed how "for effective goal-directed behavior, 'integrative capacity'

must be adequate to the integrative task. Disintegration of the mechanism of goal-directed behavior occurs whenever the integrative task exceeds the integrative capacity." He concluded: ". . . it is evident that the integrative task increases roughly in proportion to the motivating pressure of the underlying need or to the sum of the pressures of conflicting needs. . . . If so, integrative capacity should vary as a positive function of one's confidence of attaining the goal."

As learning difficulties are coming to be increasingly regarded as symptoms of intra-psychic conflict and of neurotic adaptation in general, a review of the literature revealed that dynamic psychology is giving an increasing emphasis to the implications of psychodynamic theory for education. Until now, however, the approach to the relatedness between psychodynamic theory and education has been on an individual or "case study" basis from which has developed a considerable body of theoretical discussion that has by now been broadly accepted. The "case study" methodology has as yet, however, not been followed up further with scientific experimentation. While early psychiatric literature reflected almost an exclusive pre-occupation with an exploration of the "unconscious" and with instinctual drives, Anna Freud [19:53] noted the implications of these earlier pre-occupations for education. She stressed that in order for the child to achieve the kind of adaptation that is required in our present Western civilization, he must

> . . . tolerate larger and larger quantities of "pain" (frustration,strain) without immediately having recourse to his defense-mechanisms. It must, however, be admitted that theoretically it is the business of education rather than analysis to teach him this lesson.

Sigmund Freud [22:16-17] laid the broad framework for the later research into the problems of school adjustment when he wrote:

> . . . the ego functions of an organ is impaired whenever its oregeneity, its sexual significance is increased. . . . The ego renounces those functions proper to it in order not to have to undertake a fresh effort of repression, in order to avoid a conflict with the id.
>
> Other inibitions evidently subserve a desire for self-punishment. . . . The ego dares not do certain things because they would bring an advantage which the strict superego has forbidden. . .
>
> The more general inhibitions of the ego follow a simple mechanism of another character. When the ego is occupied with a psychic task of special difficulty. . . it becomes impoverished with respect to the energy available, that it is driven to restrict its expenditure in many places at the same time.

The insight contained in this work provides much of the basis for the contributions of psychology, psychiatry, psychoanalysis and education to the problems of adjustment to learning situations.

The approach by Liss [40:126-131] on problems of education is typical of much of the subsequent thinking which strongly emphasized that learning needs to take account of the child's sublimated energy from his component instinctual drives.

Josselyn [33:86] tied in directly the child's learning difficulties in school to disturbances in the pre-latency phase of the child's development. She wrote:

> One of the school problems of the latency period is emotional blocking in learning. . . . related to early repression of sexual curiosity. . . . Under therapy these children are able to bring their sexual questions to consciousness. . . and they are able to extend their desire to learn to a wider area. . . .

Many writers have stressed how the classroom becomes the locale for the acting out of the past of the student, and incidentally, also of the teacher. Anna Freud [18:87] saw this when she stated:

> . . . a young child's training (education) is facilitated by his love of adults and his wish to retain their affection and approval. . . .

She described further how the child carries with him into the school situation the attitudes that he has previously acquired in relation to his parents. Klein [34:263] wrote in the same vein when he stated:

> Most children have experienced some of the symptoms associated with a reluctance to go to school. All of a child's worries, fears, anxieties, self-consciousness, feelings of inadequacy, his relation to his parents, to his siblings and to himself, tend to gain reflection in the school situation. The symptoms associated with school distress range from the physically expressed anticipatory anxiety symptoms such as nausea, vomitting,diarrhea, abdominal cramps, great difficulty in getting up in the morning, which often vanishes magically on holidays, to disorders in learning and behavior in the classroom, and finally to the avoidance of school, called truancy.

In a later article, Klein [34:369] stated:

> School experiences are the first important experiences outside the family circle that involve a systematic separation from the home and where the child is confronted with the need to adjust to strange children

> and adults, and at the same time to perform tasks from which escape is difficult. The attitudes toward the teacher, the classmates and the schoolwork are an important bridge between early attitudes to the parents, the siblings and the self, and their later expression in adult life. . . .

Writing in a similar vein and stressing particularly the concept of identification, Pearson [53:147-148] stated:

> Identification is one of the most important mechanisms in the process of learning. . .if the child loves the teacher, he wants to please him. The best way he knows to please the teacher is to do what he asks, that is, to be like him. Because he loves the teacher and wants the teacher to love him, he identifies himself with the teacher as he formerly did with his parents. . . . Of course, all of the dynamics in this process go on unconsciously and no one realizes they are there, but the end result is noticed. . . .

And again, in the same work, Pearson [53:149] continued:

> As identification with the teacher takes place because the child loves the teacher, any emotional reaction of a difficult nature, such as hate, anger, or fear, will interfere with the identification and therefore, with the learning process. . . . If he dislikes the teacher, for whatever reason, if the rewards of the teacher's love do not grafity him sufficiently, or if the teacher dislikes him, he will refuse to learn even a subject that is somewhat interesting in itself.

Sex Differences in Achievement and Personality

A review of the literature related to the problem of investigating the age differences and sex differences in the relationship between self-concept and grade-point average revealed that no studies have been undertaken that have a direct bearing on the problem. As indicated in the review of the literature dealing with the problem of the relationship between self-concept and grade-point average, the self has only recently become a topic for scientific

inquiry. In the main, however, the research and theoretical works that comprise the literature in the field concerned themselves with the composite organization of the child. It has also been pointed out that by and large even this research and theoretical discussion has not been directly tied in with the learning process, and especially with achievement, as measured by grade-point averages. It is not surprising, therefore, that a study of age differences and sex differences in the relationship between self-concept and grade-point averages has not been undertaken.

On the other hand, an investigation of the literature regarding sex differences revealed that these have been investigated and reported for almost every physiological variable, including body build, anatomical characteristics, gene constitution, biological functioning, bio-chemical composition, maturational rates, physical strength, viability, and infant mortality rates. While these had only indirect bearing on the problem of this study, they are nevertheless reported to simply point out the variables that have been investigated.

Gesell and his associates [23:85], of the Yale Clinic of Child Development, compiled a vast body of data over a period of many years, much of which is in the form of observations of the developmental progress of more than one hundred boys and girls almost from the time of their birth through the fifth year and beyond. While these writers have been particularly interested in defining "behavior norms," they have also reported in their findings some significant sex differences. They wrote:

> Considerably before the end of the first year--by the ninth month--we noted boys are ahead in locomotor development, such as creeping and other movements involving muscular strength and physical activity. Of the infants we studied, the postural behavior of the boys--including standing and creeping--was on the average about a month in advance of that of the girl infants. The little girls were not so active in a motor way, showed less motor drive and sat longer, engaging in more sedentary activity involving finer hand motions.

The considerable body of literature that dealt with individual differences made note of sex differences also, particularly in reference to emotion, personality adjustment, intellectual development, and scholastic achievement. While the literature contained a large number of comparisons between the sexes, there is a considerable paucity in the kind of studies aimed at an understanding of the factors underlying such differences. McGeoch [48:243], writing largely from the environmentalist point of view, addressed himself to this problem as he wrote:

> . . . there have been few systematic investigation of the conditions which determine obtained differences in rate of learning. Instead, experimenters have seemed to be searching for fixed and constant differences, presumably differences determined by innate conditions. . . .

It should be noted that these studies, despite their claims, failed to demonstrate any fixed and constant differences, while writers on the psychology of learning tend to view obtained sex differences in laboratory setting experiments as related more to differences in stimulation and training. McGeoch [48:246], for example, commented on this point also as he stated:

> There is no crucial positive evidence that native differences do not play a part, but the evidence that differences in stimulation and training can account for the obtained differences in many cases is so cogent that there seems little need to call on native conditions, except in so far as they operate to favor particular classes of prior training and interest.

Numerous studies are reported which have investigated the sex differences in scholastic achievement. The bulk of these studies, however, measure achievement by the use of standardized tests. Notably fewer studies have concerned themselves with sex differences in achievement as measured by grade-point averages. In general, investigations in this area have shown that girls tend to achieve higher grade-point averages than their male counterpart. Anastasi and Foley [1:661-662], in summarizing a study by Lentz that is typical of the investigations in sex differences in school grades, wrote:

> In school grades, girls excel consistently, even in those subjects which favor boys. Thus a comparison of grades in arithmetic, or history, or any other subject in which boys obtain higher achievement test scores, show a sex difference in favor of girls. . . . The girls were found to excel consistently in school grades, when compared with boys receiving the same achievement test scores. Thus, the grades showed a far greater female superiority than seemed to be warranted by performance on objective achievement tests.

This is somewhat paradoxical in the light of the general agreement in the literature that sex differences as measured by intelligence tests are "slight" and that even where achievement test batteries reflect only slight differences in the learning of the material, girls, nevertheless, continue to

excel in grade-point averages. Stroud [62:408], for example, wrote:

> On the whole, sex differences in marks received and in failure, retardation, acceleration and like evidence of progress in school, are greater than those found in performance on educational achievement tests. . .

Johnson [30:44] was equally impressed with the inconsistency between teachers' marks and achievement test scores for the same pupils. He found that 63 per cent of the failing grades given in schools covered in his study were received by boys and that the median grade for all boys was 78.3, but for all girls, 80.3.

In sensing the implications of this discrepency, Johnson [32:25-26] followed up his earlier study with an analysis of the difference between the standings of boys and girls, respectively, on standardized achievement tests, on teacher markings and on intelligence. In brief, his findings were that in the St. Louis high schools investigated, 61 per cent of the boys were in the upper half of their classes on achievement test scores, which meant that only 39 per cent of the girls rated in the upper half. Further, 51 per cent of the boys and 49 per cent of the girls rated in the upper half on intelligence test scores. When it came to teachers' grades, however, these ratios became reversed. Here, 59 per cent of the girls reached into the upper half grades and only 41 per cent of the boys achieved a like position.

Douglass and Olson [14:283-288], using four of the larger high schools in northern Minnesota as their experimental group, reported findings that are further supportive of the findings described by Johnson. Again boys fared worse than girls in the matter of teacher marks. Moreover, they point up an interesting relationship of these marks to the sex of the teacher who assigned them. Thus, female teachers in these high schools failed 10.9 per cent of the boys but only 5.3 per cent of the girls; the men teachers failed 5.1 per cent of the boys and 4.5 per cent of the girls.

Studies were also reported by Schinnerer [57:558], Swenson [63:522], Edmison [15:245], Anastasi and Foley [1:661], Lawson [37:176], and Ryan [55:558], that corroborated the findings of Johnson as these pointed to sex differences in school grades as well as to Johnson's statement that female teachers consistently gave female students grades that averaged considerably higher than those given to boys.

These studies are in agreement that girls in general attain higher grades while the boys attain somewhat higher achievement test scores. These findings tend to support the theory stated in Chapter I that girls, in better meeting the role expectations of teachers, attain higher grades while the boys, with their behavior which is in greater disparity with the teacher's role expectation of them, attain lower grades.

While numerous studies that have investigated the sex differences in scholastic achievement have been reported, few

have attempted to investigate the underlying factors that determine the sex differences in the first place. Many studies are now available that imply that female superiority in this school subject or that school subject is due to some innate factors. Thus, Stroud [62:410], in summarizing research data on sex differences in language development, wrote that "inasmuch as girls are superior in language functions in school, it may be of interest to point out, as a final word on sex differences, that this feminine superiority in language obtains from the start." Anastasi and Foley [1:652], in summarizing data on sex differences, also reported that "verbal superiority of girls persists throughout the successive educational levels, the sex differences often becoming more pronounced at the upper levels." The authors went on to report that "girls usually excel in speed or reading and in tests as opposites, analogies, sentence completion, and story completion." Furthermore, "girls also excel in memory, although the differences are neither so large nor so consistent in this respect as they are on verbal tests." With regard to studies on spatial and mechanical aptitude tests Anastasi and Foley [1:665] summarized a number of studies in this area and stated that

> . . . In the light of the negative findings in the Gesell observations, it is likely that the sex differences reported on such isolated tests may result from differences in the play experiences of the particular groups of boys and girls studies.

Numerous studies reported by Anastasi and Foley [1:633-634] have emphasized sex differences in the rate of physical

growth and the authors observed that "it has been suggested that many girls may be accelerated in intellectual as well as physical development. . . ." The authors concluded, however:

> It should be noted that intellectual acceleration of girls has not been directly demonstrated. Its possibility has only been inferred by analogy with physical development. It is doubtful, however, whether physical maturity can have much influence upon intellectual development. The data on the relationship between psychological and physical traits are too consistently negative for such an assumption.

As indicated earlier, the investigations reviewed above have been more or less typical of the work of the maturation school of thought. Olson [51:4] summarized the professional and also the popular point of view regarding the concept when he stated: "The word maturity refers to a child's total state of readiness for an activity under discussion." Olson[51:17] expanded the concept of maturation still further in highly concise fashion when he wrote:

> Change is the first law of growth. The organism is never static. . . . The change that occurs in the balance between intake and excretion is described as growth. The growth process is characterized by both regularity and rhythm. In broad outline each individual passes through the same successive stages in very much the same sequence. In some the physiological time clock is running rapidly, and the sequences are compressed into a narrower portion of the life span. In others, physiological time is slower, and the sequence of events is stretched out over a longer period. As will be seen in later discussions of the stimulation and retardation of growth, the individual himself and the adults about him have little control over physiological time; wise nurture, therefore, in both physical care and education, makes no attempt to alter the individual's rate of growth and development.

The literature contained several references to other points of view that tended to emphasize the environmental stimulation to which an individual has been exposed as determining behavior and adaptation in general. Differences in physical condition were considered slight, or tended not be considered. Anastasi and Foley [1:637], having in mind the work of social anthropologists, stated rather neatly and clearly when they wrote:

> That sex roles and sex sterotypes vary in different times and places is apparent not only from anthropology but from our own cultural history as well. To be sure, a few persistent differences in behavior can be identified. . . . Thus the widespread prevalence of male dominance in different cultures may be historically related to sex differences in physique and muscular strength. But the amount of such sex differences in dominance varies widely from culture to culture, as does the manner in which it is expressed. Moreover, many characteristics associated with the traditional male stereotype in our culture may be absent or reversed in other cultures.

In continuing their search for underlying factors Anastasia and Foley [1:623] discussed at another point the dissimilarity in educational opportunities for the two sexes, the subtle but omnipresent home influences that are introduced differentially in the environments of boys and girls, and finally, the element of social expectancy which the authors consider a "relatively intangible but highly effective factor. . . " They stated:

> This operated to perpetuate all group differences, once they have been established. What is expected of an individual is a powerful element in the determination of what he will do. When such expectation has the force of social tradition behind it and is corroborated at every instant by family attitudes, everyday contacts in work and play, and nearly all

> other encounters with one's fellow beings, it is very difficult not to succumb to it. . . .

Young [68:136], a social psychologist, developed the same point when he wrote in somewhat different terminology: "A child perceives himself after the manner in which others have reacted to him. . . . His role-taking is an adaptation to the expectations of others." Slotkin[60:175], a social anthropologist, wrote on this same point: "Man's plasticity implies that he does not have enough inherited ways of acting by which to adjust. He therefore has to learn most of his responses. Though he acquires some by himself, most of what he learns he adapts from others. . ." In considering cultural influences on various psychological processes, including set, attention, perception, emotion, concept formation, learning, and recall, Slotkin [60:175-256] developed his thesis, supported by studied observation of our own and foreign cultures, that all these psychological processes are dependent on culture. He wrote:

> It was stated. . . that the infant does not inherit enough action patterns by which to adjust, and that most of those he does inherit are random and unorganized. It follows that he acquires the majority of his actions, and even in the case of those which are inherited he has to learn to direct and organize them. Thus his action patterns are chiefly acquired. . . .

And again, in a reference intended by the author to apply to learning in general, but particularly relevant to a study of sex differences in personality and achievement, Slotkin [60:209-210] discussed the impact of the interaction between heredity and environment on the learning responses of individuals. He stated:

> . . . . Individuals. . . are often exposed to customs in varying situational contexts, and even in a common situation these are, at the time, individual differences in motivation, set, attention, and perception....
>
> In a classroom the teacher provides the students with common instruction in a common situation, yet no two students write identical examinations (unless they are cheating), which shows differences in learning.
>
> In fact, an individual's motivation, set, attention, and perception at the time of exposure to a custom may lead him to reject it.

Stroud [4:408], in considering the question of sex differences in achievement in the school situation reported a study by Ayres done as long ago as 1910 which led Ayres to conclude that "our schools as they now exist are better filled to the needs and natures of the girl than of the boy pupil." Stroud [62:408] considered other aspects to this problem. He stated:

> . . . .No doubt boys feature in disciplinary problems with much greater frequency than do girls. There appears to be no necessary reason to assume that all so-called behavior problems are symptomatic of maladjustment. Some of them, in fact many, probably reflect group mores. A certain amount of protest is in masculine mores at the Juvenile level. Indifferent cooperation and a certain amount of nonchalance about his lessons and "cussedness" are not only condoned in certain juvenile masculine groups, but also rewarded. The fact that men in general are ostensibly as well adjusted as women seems to accord with the notion that a portion of the so-called maladjustment of boys may be attributed to adherence to custom. . . .

Blair and Burton [8:35] in having become impressed with the sharp differentiation that developed during the elementary school years between boys and girls, reported from a study by Blatz and Bolt which stated that "all the objectionable social qualities of this age appear to be more

pronounced in boys. Blair and Burton reported that the Blatz and Bott study "revealed a considerably higher frequency of school misbehavior among boys at this age." Blair and Burton [38:35] reported a study by Levy and Munroe which pointed out

> that the figures for attendence at public child guidance centers show that the boys expressed their antagonisms at this age much more often than girls. Girls are referred to guidance centers most frequently between sixteen and seventeen; boys, at ten. At ten years boys are sent to clinics for help three times as frequently as girls.

Anastasi and Foley [29:668] reported "extensive tests" by Hartshorne, May and Shuttleworth on approximately 850 elementary school children in three cities in order to determine consistent sex differences in "social mores and restriction, as well as in other aspects of personality commonly designated as character traits." The investigators concluded that: "It appears on the surface at least that girls are more sensitive to both conventional and ideal social standards than boys." This study is typical of many others reported in the literature that aimed at uncovering personality traits that influenced school success, especially as measured by grade-point averages, in favor of the girls.

Approaching this same problem from a somewhat different point of view Blanchard [10:11], in investigating the considerably greater frequency of reading problems among boys than girls, made the following observation:

> . . . . Possibly there are differences between boys and girls in the points at which they are most likely to meet with difficulties in emotional

> development. It has been stated, in the psychoanalytic literature, that in early psychosexual development, "masculine" or active and aggressive strivings are usually held in check, in girls, by passive, feminine tendencies, so that the former seldom reach the same strength in girls as in boys. Possibly, then, for boys development may be especially complicated on the side of handling aggressive and destructive impulses and feelings, in some instances, if these are stronger and less inhibited by counteracting forces at certain stages of development for boys than for girls. . . .

From the maturation point of view, however, Anderson and Dearborn [3:31-41], while agreeing that more boys than girls, suffer reading disabilities, stressed that "from the standpoint of total growth, girls are likely to be more ready for reading than boys at the beginning school age. It follows, therefore, that more boys will falter than girls, if equal pressure is brought to bear on both to read. . . ."

Writing from a point of view sharply in contrast to the maturation school of thought, Liss [43:108-109], a psychoanalyst, stated:

> We find that each culture has its own concepts of masculinity and femininity, and that these mores influence learning. These concepts become compartmentalized and often rigid. . . each culture has its own mores as to what is a feminine activity. . . . World wide investigation indicates to the anthropologist how much such attributes are conditioned by the historical background of the people and how the interpretation of what is masculine and what is feminine varies from culture to culture. In many cultures, as in our own, the emphasis for the male is on activity, essentially physical activity and physical prowess. This concept is engendered in the young male and is something which remains the core of his self-evaluation. Any deviation in fundamental skills requiring physical strength and aggression is regarded as lack of potency in males.

And again:

> The emphasis on physical activity rather than cerebral function is an important aspect of the younger years. It conditions and affects its attitude toward learning. . . .

In thinking through the sex differences in intellectual achievement in the formal school situation Liss, [43:110-111], speaking generally for the psychoanalytic point of view, wrote the following:

> Often in homes where the self made successful father has manifested his creativity in trade rather than in academic persuits and activities, the mother, with more opportunities for leisure available to her as a benefit from generationsof pioneer toil, has become the so-called cultured member of the family. This represents an easier identification for the female than for the male siblings. In such cases intellectualism becomes enmashed in feminine identification and creates difficulties for the boy in the resolution of the oedipus complex and the adoption of a truly masculine role.

Klein [35:378] offered another explanation for sex differences in achievement when he declared:

> Learning is generally perceived as masculine. This may stimulate the girl's wish to amass knowledge as a sublimated expression of her masculine strivings or it may cause her to withdraw from it at some point because it conflicts with her feminine strivings. Usually we see many oscillations between these urges. At the beginning of school life, under the spur of her masculine urges we find little girls often do well at school. In adolescence with its upsurge of feminine strivings, some girls lose interest in their studies or become inhibited in them, pouring out their energy in more directly feminine interest. . . .

An exceedingly relevant and pointed discussion of the broad underlying factors that tend to promote sex differences in school performance, Klein [35:378] continued:

> Where the mother is the more intelligent parent, learning may seem to be feminine and may result in conflict in the boy. This conflict may be heightened if there are bright sisters or female cousins, or

> bright classmates. Excelling at school is then often regarded as a sign of being a sissy. As one patient said, "None of the regular guys studied or got good marks. The fellows who studied were the skinny kids with big glasses, the sissies." This trend is further augmented by the fact that learning does require a certain degree of passivity toward the teacher. It is thought to be feminine to be good in the classroom and listen to the teacher. Proof of one's masculinity demands a certain amount of defiance or behavior disorder. Prowess at sport is often contrasted with scholastic achievement. . . . The culmination of the contemptuous masculine attitude toward learning is found in the fascist remark, "When I hear the word culture I reach for a gun."

As indicated from these quotations, psychoanalytic literature stresses the mechanisms of identification as areas of conflict for the male which pose a particular problem to him in the formal learning situation and which accounts for some of the discrepancy in achievement between boys and girls. This point of view is shared also by writers in other areas. References to the writings of anthropologists has already been made. Parsons [51:610], a sociologist, in writing of age and sex in the social structure of the United States, takes the same position. He too emphasized the role expectancy of docility for the girl and the role expectancy of recalcitrance for the boy. He remarked that "there is really no feminine equivalent of the expression 'bad boy'." Parsons emphasized how girls are initiated from an early age in the feminine role through being continually about the house while, especially to the urban middle class boys, the father's work is usually out of the range of his personal experience. He pointed out that the relative abstractness

and intangibility of many of the masculine functions makes their character even less accessible to the male child. This "leaves the boy without a tangible meaningful model to emulate and without the possibility of a gradual imitation into the activities of the adult male role." In an approach to the problem that leaves implications for sex differences in scholastic achievement on the high school level, Parsons wrote:

> Although the pattern of equality of treatment is present in certain fundamental respects at all age levels, at the transition from childhood to adolescence new features appear which disturb the symmetry of sex roles while still a second set of factors appear with marriage and the acquisition of full adult status and responsibilities. . . .
>
> It is at the point of emergence into adloescence that there first begins to develop a set of patterns and behavior phenomena which involve a highly complex combination of age grading and sex role elements.

Parsons continued:

> It is of fundamental significant to the sex role structure of the adult age levels that the normal man has a "job" which is fundamental to his social status in general. . . . In the case of the feminine role. . . the majority of married women, of course, are not employed. . . . In this situation the primary status carrying role is in a sense that of a housewife. . . that her husband's wife, the mother of his children, and traditionally the person responsible for a complex of activities in connection with the management of the household, care of children, etc. . . . . This leaves the wife a set of utilitarian functions in the management of the household which may be considered a kind of "pseudo-" occupation.

Sherif and Cantrill [57:238] commented on this very point of the academic situation being more contradictory for the adolescent girl when they wrote:

> . .it is the female in a bourgeois society who is in most danger of remaining "marginal," of experiencing continued conflict due to the contradictory ego-attitudes and situations in which she finds herself. . . . In the areas of work opportunities, these problems are particularly accentuated for girl. . . .
>
> Having provided its boys and girls with the same educational opportunities of vocational motivation, our society then reverses itself, suddenly denying the girls the very rewards it has held out to them throughout the whole course of their development.

Summary

An examination of the literature relevant to the problem under consideration revealed that no studies have been undertaken that are directly concerned with the relationship between self-concept and grade-point average. It is not surprising, therefore, to find that no studies have been undertaken that have inquired into the age differences and sex differences in the relationship between self-concept and grade-point average. While there has accumulated a considerable body of literature on the relationship between personality factors and learning, by far the greatest portion of this literature dealt with non-emotional factors in the learning process and only a considerably smaller portion dealt with the relationship between personality as a whole, or as a composite organization, and intellectual functioning. No study has yet undertaken the investigation of the relationship between self-concept and grade-point average, and in addition, the self as a concept has only lately been recognized as a construct of sufficient importance to even

warrant it as a reputable topic for scientific inquiry. In the writings that have accumulated in the relationship between emotional factors and learning the failure on the part of the great mass of the writers to have made clear to educators just in what way the personality factors as a whole are related to learning represents a serious omission. Because of the small amount of research in this area this study was undertaken. Furthermore, investigating the relationship between self-concept and specific educational disabilities is another area for research that merits consideration.

The literature also contained many studies that have dealt with sex differences in scholastic achievement. However, again the bulk of these investigations has measured achievement by the use of standardized achievement tests and notably fewer studies dealt with sex differences in achievement as measured by grade-point averages. By and large, investigations in this area have shown that girls tend to achieve higher grade-point averages than their male counterparts. In contrast to the relatively numerous studies that have inquired into the sex differences in scholastic achievement, few have attempted to move into the problem of investigating possible causative factors that have determined these sex differences in the first place. What does exist relevant to this problem is often incomplete and employed distinctly different methodologies making comparisons difficult with the bulk of the work having been by those who lean toward the maturation, or "growth," point of view.

The literature contained some psychiatric and/or psychoanalytical references to this problem, however, these were not experimental comparative studies, but remained in the realm of theory. By and large, these emphasized that sex differences in achievement are related to differences in environmental stimulation and role expectations to which the two sexes are exposed almost from birth onward. More particularly, psychoanalytic literature stressed the conflict in identification especially for the male child as being a particular problem in the formal learning situation when "school" learning becomes equated with femininity.

The majority of present day writers in the social science field conceive of the self as a learned psychic phenomenon that exerts pervading influence in the individual's total adaptation. Likewise, the relationship between the development of self and learning is not disputed in the literature and, in fact, writers on this topic agree that the development of the self is inseparable from learning.

With the stressing of the need for examining the environment of the child as an approach toward understanding his learning difficulties, education turned more and more to psychology, psychiatry, and psychoanalysis for an understanding of causative factors. Dynamic psychology, which had all the while been pre-occupied with the examination of the unconscious and with the instinctual drives, and had only recently turned its attention to the psychology of reality adaption, or ego psychology, now gave increasing

attention to investigating the relationship between learning in the formal school situation and the emotional organization of the child. Until now, the approach had been largely through the case study method from which, however, has developed a considerable body of theory that provides fruitful areas for further scientific experimentation.

The nature of the child's adjustment to the formal learning requirements imposed by the school are viewed as being conditioned by the totality of his pre-school or early home centered experiences. Specifically, learning is seen as conditioned by the parent-child relationship in the context of mastering and sublimating primitive physiological interests and beginning with the first learning problem, which is centered around sorting out the self from the non-self. The child learns, that is, becomes socialized, because he is dependent on others and on their positive regard for him for his very physical survival first, and later, for his psychological survival. If his family relationships are not conducive to developing a strong and worthwhile self-concept, then conflict is aroused which deflects energy away from positive growth strivings as these are required in the service of repression and/or inhibition for compensatory gratification.

CHAPTER III

PROCEDURE

The purpose of this chapter is to present the methodology that was followed in the investigation of the problem under consideration. More specifically, sources of the data, method of procedure, and treatment of the findings will be described and explained.

Adaptation and Validation of the SCS-DAP

In considering the problem under investigation, one of the first tasks was to find a valid measurement of self-concept that was both objective and would lend itself to quantification. Inquiry into the literature revealed that the self as a concept has only lately come to be regarded of importance and that consideration of the self was still largely confined to the theoretical realm. It was not surprising, therefore, that the review of the literature did not reveal any valid measurement of self-concept that met the criteria of objectivity and possibility for quantification. While it is true that projective psychology sheds light on the nature of the self that characterizes a given individual it is also true that the findings of projective psychology, at least in the area of the determination of the self-concept, are not yet adequately prepared to meet

the relatively rigorous tests of objectivity, quantification and validity. Thus it became obvious that the investigation of self-concept necessitated a new tool that would meet the criteria described earlier. With this in mind, a preliminary study was designed to develop a valid tool to objectively measure self-concept which would lend itself to quantification.

Certain criteria were judged to be important in the selection of this instrument. These included objectivity, ease of quantification, and validation. In addition, however, an important concern dealt with the search for a test that would be non-verbal in nature for it was well recognized that the test would be administered to subjects some of whom would have educational, including reading, disabilities. Another important criteria was that the tool should be projective in nature, for in keeping with the formulated definition of the self-concept it was essential that the unconscious levels of this concept be measured. This immediately introduced still another criterion. In addition, the tool finally selected should not be perceived by the subjects as a test, in order to reduce the personal threat and minimize self protective maneuvers. Certain other criterion were held essentional for the technique. Its administration and scoring for a group of subjects should be characterized by ease, rapidity and facility.

After considerable investigation of available tests, the Machover Draw-A-Person Test (henceforth to be referred

to as the DAP), as developed by Karen Machover, was selected for having met all the criterion described earlier as well as having the additional advantage of requesting the subject to perform something with which he has already established a degree of familiarity. The DAP consisted of a free hand drawing of a person, which was felt to result in an admixture of conscious and unconscious projection of his self-portrait. According to Machover, the drawing of the human figure indicates an intimate tie-up between the figure drawn and the personality of the individual who is doing the drawing. Since the subject who is drawing must rely consciously and unconsciously upon his whole system of psychic values, Machover proceeded on the hypothesis that the figure drawn is related to the individual who is drawing with the same intimacy as any other of his expressive movements. Because of this, the drawing appeared particularly suitable as a test to measure self-concept especially as it involved a projection of the body image and provided a natural expression of one's body needs, conflicts, and self-concept. Unfortunately, however, neither Machover nor any one else, had developed a scheme for scoring the technique for self-concept. Therefore, quantification was needed. An inspection of many drawings revealed certain categories that appeared to reveal self-concept. These categories are listed and defined as follows:

1. Shading. Light, dim, subtle, and uncertain lines which furtively accent particular parts of the figure. Patterned or stylized shading.

2. Reinforcement. Shading of the boundaries of clothing or the figure. Heavy dark lines or parts of the drawing emphasized through retracing over the same area.

3. Erasures. Any attempt to alter or perfect all or part of the drawing through erasure.

4. Detail in figure. Unessential features or details added to the figure or background.

5. Sketchy lines. Parts of the body particularly the outline defined by light, broken, blurred, vague, fuzzy lines.

6. Transparency. Body of the figure completely transparent or inadequately clothed so that body parts ordinarily covered are shown.

7. Asymmetry. Imbalanced and lopsided arrangement of the body parts in respect to size, shape, or position on the opposite sides of the center.

8. Distortion. Any unnaturalness or irregularity in form. Any non-human aspects to figure drawn often displayed by size disproportion.

9. Incompleteness. Figure not drawn complete, lacking in significant body parts or clothing.

10. Mixed age. Disparity in the physiological maturation of various body parts such as breasts emphasized in an otherwise childish body.

11. Opposite sex identifications. Figure drawn is of the opposite sex of the subject or if of the same sex, opposite sex characteristics are displayed.

12. Primitiveness. Over-all figure is crudely and roughly drawn. Specific points are confusion of full and profile view of the head, mouth emphasis, trunk incomplete, omission of the neck, and disorganized body representation.

13. Immaturity. Drawing is marked by elaborate treatment of the midline such as the adam's apple, tie, buttons, buckle, and fly on trousers. There is emphasis on mouth and/or breasts.

After defining each of the thirteen categories they were rated on a five point rating scale. A score of one indicated a great deal of the characteristic present in the drawing. A socre of five indicated that little or none of the characteristic was present in the human figure drawing. This then was the procedure followed for the quantification of the Self-Concept Scale of the Draw-A-Person Test (henceforth referred to as the SCS-DAP). The validity of the SCS-DAP was established through the following procedure: After an individual interview by a judge--a clinician other than the investigator of their problem--rated a research group of children for self-concept. In order that the clinician might do this, each of the elements contained in the definition of self-concept was rated on a five point rating scale at the termination of his interview. The subjects employed for the study to validate the SCS-DAP were selected from referrals to the Flint Child Guidance Clinic for a variety of personality and/or behavior problems. In all, sixty subjects were employed. These were divided into

three groups, one whose birthdate was 1947-1948, another whose birthdate was in 1943-1944 and a third whose birthdate was in 1938-1939. In turn, each group was evenly divided between ten boys and ten girls. Half of each subgroup was also selected for educational disabilities, that is, they were one year or more retarded in grade level in one or more subjects. In this way half of the total group represented thirty non-educational disabilities while the other half of the total group represented thirty educational disabilities. At the time of rating the judge was also unaware which of the subjects belonged to the non-educational disability or educational disability group. In addition he was also asked to administer the SCS-DAP at the termination of his diagnostic interview which was then socred by the author without either knowing the self-concept rating of the clinician, or without himself knowing in which category (either educational or non-educational disability) to which the subject belonged. After administering and scoring the JRS and the SCS-DAP it was now possible to correlate these scores to complete the validation study. Machine calculation of the Pearson Product Moment Coefficient of correlation was used in as much as both variables were of a continuous nature.

An examination of the SCS-DAP scores made it apparent that some of the categories of the SCS-DAP were discriminating better than others between mature and immature self-concept. The SCS-DAP was therefore subjected to an item analysis to

sort out the better discriminating characteristics from those that were discriminating less adequately between mature and immature self-concept. The scores of the characteristics for those subjects who were of the upper 27 per cent of mature self-concept of the SCS-DAP were compared with the scores of the characteristics for those who fell in the lower 27 per cent of the research group. It was decided to arbitrarily set the cut-off point when the difference for each category between the upper and lower 27 per cent reached a magnitude of + 2.0. The nine categories that discriminated best in the terms of yielding the greatest difference were then retained in the final revision of the SCS-DAP.

The validation procedure for the SCS-DAP was thus completed. At this time it was considered a sufficiently adequate tool for the measuring of self-concept and made it possible to proceed with the major problem of the study. The criteria described earlier that had been originally set for an instrument to measure self-concept had been met satisfactorily and as a result of the validation procedure the SCS-DAP was now sufficiently refined to make it a useful and feasible instrument for the main body of the research. Before this was accomplished, however, a correlation pilot study between SCS-DAP and the presence and absence of educational disability and the age differences and sex differences in this relationship was undertaken. The statistical measure used for this study was the Biserial coefficient of correlation

inasmuch as the variables were of a continuous (SCS-DAP) and dichotomous (presence or absence of educational disability) nature.

The Main Body of Research

Description of population. In beginning the investigation into the main problem under consideration in this study the SCS-DAP was administered to the third and sixth grades of the Collidge, Washington, and Durant elementary schools and to the eleventh grade of the Central High School of the public school system in Flint, Michigan. The decision to use the particular schools listed above resulted from the desirability of obtaining as adequate a representation of the general school population as possible, and the final selection of the schools was agreed upon only after consultation with appropriate administrative school personnel. Three different grade levels divided equally between boys and girls were included in order that age differences and sex differences might be determined and to investigate the relationships as described in the problem of the study. Earlier than third grade levels could not be included in the experimental groups. The practical consideration was that grades are only sporadically assigned throughout the Flint public school system during the initial two years of the elementary school. Further, by the end of the first or second grades differences in grade point average of sufficient magnitude may not have appeared. The third, sixth, and

eleventh grades were finally selected because they met the above criterion. Another consideration for their selection was that they were sufficiently spaced to determine the age differences, if any, in the relationships being investigated. A random selection of 100 subjects, evenly divided between the sexes, was chosen from the third, sixth, and eleventh grade levels making a grand total of 300 subjects. It was this group that finally constituted the research group for the study under consideration.

Administration of the SCS-DAP. The SCS-DAP was administered to these subjects in their classrooms which constituted relatively small groups of children ranging from twenty-four to thirty-three pupils. Eight and one-half by eleven inch white paper and pencils were provided each time. The directions for the administration of the SCS-DAP was each time identical. The subjects were asked to print their name, grade, and school on one side of the paper and then requested to turn the paper over in order to have available a completely free page on which to proceed with their drawing. Instructions as follows were then read:

> I am interested in finding out some things about children and their drawings. I would like you to draw a picture of a person for me. Please draw all of the person. If you like you may erase. Be sure to draw all of the person.

The subjects were permitted to have as much time available to them as they needed to complete the task. In no case, however, did the time required for the third and

sixth grade subjects exceed fifteen minutes and the time required for the eleventh grade subjects did not exceed twenty minutes.

Statistical treatment of the data. Following the completion of the SCS-DAP the drawings were scored without knowledge of the grade-point averages of the subjects in order to eliminate contamination. Because both variables that were to be correlated in this study were continuous, Pierson Product Moment Coefficients of correlations calculated by machine, were selected as the appropriate statistical measures to determine the relationships as hypothesized in this study. In order to obtain the significance of this statistical measure the standard error of this correlation was calculated.

In addition, one and two tailed tests of significance, as described by Edwards [16:304-307], were employed to evaluate the significance of the age differences and sex differences displayed at the various grade levels investigated.

CHAPTER IV

DATA AND RESULTS

The purpose of this chapter will be to report data and results obtained in the investigation under consideration. To facilitate clarity and understanding of the data and results the reporting of this material will be done in two separate sections, one dealing with results of the adaptation and validation procedure and pilot study, and the other with the results of the main body of the research.

Adaptation and Validation of the SCS-DAP

With the completion of the selection and definition of the thirteen categories of the SCS-DAP this test was administered by a judge--a clinician other than the author--to sixty subjects after the completion of an hour diagnostic interview. At this time the clinician also completed the JRS. The results, as derived from this calculation, are listed in Table I.

TABLE I

THE RELATIONSHIP BETWEEN THE JUDGE'S RATING SCALE FOR SELF-CONCEPT AND THE SCS-DAP

N-60	Judge's Rating Scale	SCS-DAP
Range	9-24	19-48
Mean	18.1	34.7
S.D.	6.77	7.96
r		.61*
S.E.of r		.08

*Significant at one per cent level of confidence.

The biserial coefficient of correlation was calculated to measure the relationship between the SCS-DAP (self-concept) and the presence or absence of educational disability. Following in Table II are the statistics for this correlation.

TABLE II

THE RELATIONSHIP BETWEEN SELF-CONCEPT AND THE PRESENCE AND ABSENCE OF EDUCATIONAL DISABILITY-A PILOT STUDY

	N	Mean of SCS-DAP Scores	S.D.	r	S.E. of r
Non-Educational Disability	20	34.0	7.05		
				.60*	.14
Educational Disability	20	40.6	7.16		

*Significant at one per cent level of confidence.

In order to further refine the SCS-DAP the test was subjected to an item analysis. In this way it was determined which of the thirteen categories were discriminating between mature and immature self-concept more adequately then others. The characteristics that yielded the greatest differences between the two groups were identified and retained in the revised SCS-DAP test. The results of this SCS-DAP revision and refinement are listed in Table III.

TABLE III

ITEM ANALYSIS RESULTS OF THE ORIGINAL FORM OF THE SCS-DAP

Characteristics	Mean for Upper 27%	Mean for Lower 27%	Difference
1. Opposite sex identification	4.2	1.2	3.0
2. Sketchy lines	4.2	1.5	2.8
3. Incompleteness	4.3	1.2	2.5
4. Transparency	3.7	1.2	2.5
5. Immaturity	4.3	1.8	2.5
6. Primitiveness	4.1	1.7	2.4
7. Reinforcement	3.9	1.9	2.0
8. Erasures	3.6	1.6	2.0
9. Distortion	4.0	2.0	2.0
10. Asymmetry	3.4	1.6	1.8
11. Detail in figure	3.7	2.0	1.7
12. Shading	2.3	1.8	0.5
13. Mixed age	1.6	1.0	-0.3

Age Differences in the Relationship between Self-Concept and Grade-Point Average

One of the central problems in this investigation was to determine age differences as shown by grade differences in the relationship between self-concept and grade-point average. Machine calculated Pierson Product Moment Coefficients of correlation were used as the statistical measure to derive the degree of these relationships. A summary of the results is presented in Table IV.

The one-tailed test of significance [16:258] employing Fisher's "t" was calculated to determine whether or not one correlation was significantly higher or lower than another. The two-tailed test of significance [15:304-307] that used

TABLE IV

AGE DIFFERENCES AS SHOWN BY GRADE DIFFERENCES IN THE RELATIONSHIP BETWEEN SELF-CONCEPT AND GRADE POINT AVERAGE (N-300)

	Third Grade	Sixth Grade	Eleventh Grade
SD DAP	6.48	7.22	7.71
SD GPA	6.38	7.29	5.45
Mean DAP	24.57	26.47	20.54
Mean GPA	27.45	29.15	25.36
r	.54*	.38*	.72*
SE of r	.10	.12	.05

* Significant on one per cent level of confidence.

a probability formula (p) was also calculated to determine whether or not the difference between these correlations was significant. The results are listed in Table V.

TABLE V

SIGNIFICANCE OF AGE DIFFERENCES AS SHOWN BY GRADE DIFFERENCES IN THE RELATIONSHIP BETWEEN SCS-DAP AND GAP (N-300)

Grades	p Two-tailed Test of Significance	Fisher's "t" One-tailed Test of Significance
Third and sixth grades	.15	1.44
Third and eleventh grades	.03*	2.15*
Sixth and eleventh grades	.0004**	3.60**

*Difference significant on one per cent level of confidence.

**One significantly higher than other.

Sex Differences in the Relationship Between Self-Concept and and Grade-Point Average

The second major problem of this study was to determine sex differences in the relationship between self-concept and grade-point average in the third, sixth, and eleventh grades. Machine calculated Pierson Product Moment Coefficients of Correlation were used as the statistical measure to derive the degree of these relationships. A summary of the results is presented in Tables VI and VII.

TABLE VI

SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN SELF-CONCEPT AND GRADE-POINT AVERAGE FOR BOYS (N-300)

	Third Grade	Sixth Grade	Eleventh Grade
SD DAP	3.60	6.77	6.65
SD GPA	3.24	7.47	4.10
Mean DAP	22.44	23.54	18.04
Mean GPA	24.96	27.06	24.56
r	.64*	.32**	.57*
SE of r	.08	.12	.07

*Significant on one per cent level of confidence.

**Significant on five per cent level of confidence.

TABLE VII

SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN SELF-CONCEPT AND GRADE-POINT AVERAGE FOR GIRLS (N-300)

	Third Grade	Sixth Grade	Eleventh Grade
SD DAP	4.79	6.38	7.68
SD GPA	5.25	6.53	6.27
Mean DAP	26.70	29.40	23.04
Mean GPA	29.94	31.24	26.16
r	.34**	.27**	.80*
SE of r	.12	.13	.04

*Significant on one per cent level of confidence.

**Significant on five per cent level of confidence.

The one-tailed test of significance [15:258] employing Fisher's "t" was calculated to determine whether or not one correlation was significantly higher or lower than another. The two-tailed test of significance [16:304-307] based on probability (p) was also calculated to determine whether or not the differences between these correlations was significant. The results are listed in Table VIII

TABLE VIII

SIGNIFICANCE OF SEX DIFFERENCES IN THE RELATIONSHIP BETWEEN SCS-DAP AND GPA (N-300)

Grade	p Two Tailed Test of Significance	Fisher's "t" One Tailed Test of Significance
Third Grade	.08	1.72*
Sixth Grade	.79	.82
Eleventh Grade	.03**	2.20*

*Significant on one per cent level of confidence.
**Significant on five per cent level of confidence.

CHAPTER V

DISCUSSION OF RESULTS

The purpose of this chapter will be to present a discussion of the results obtained in this investigation as reported and described in the preceding chapter. As in the previous chapter, organization of this chapter will be divided into two parts, one concerning itself with the results of the adaption and validation procedure and pilot study and the other dealing with the results of the main problem of research.

The Adaptation and Validation of the SCS-DAP

Table I listed the results of the validating study which investigated the relationship between the Judge's Rating Scale for self-concept and the SCS-DAP. The magnitude of the correlation obtained (.64) indicated that a positive and very significant relationship existed between these two variables which was significant on the one per cent level of confidence. For this reason the SCS-DAP was regarded as a sufficiently valid instrument for the evaluation of self-concept to warrant its employment in the form of a self-concept scale (SCS-DAP) in the major study under consideration. A calculation of the standard error (.08) of the correlation indicated that there is less than one chance in a hundred that this correlation obtained was not significant.

It will be noted that the standard deviation of the Judge's Rating Scale was 6.77 while that of the SCS-DAP was 7.96. Plus and minus one standard deviation of JRS scores included essentially the entire range (9-24). This indicated that there was relatively little dispersion of the JRS scores and that, by and large, they tended to cluster around the mean. It could be speculated that the lack of sufficient dispersion of the JRS scores was due to the relatively small size of the population tested (N=60), or that the group was of a homogeneous nature, or both. There is, of course, some support for the claim of homogenity of population since it will be recalled that all of the subjects included in this part of the study were children referred to a child guidance clinic. However, if this speculation were reasonable, it might be expected that the scores of the SCS-DAP would show a similar lack of dispersion. The standard deviation of the SCS-DAP (7.96) does not bear this out. Considering the range of SCS-DAP scores (19-49) it became apparent that this range included approximately plus and minus two standard deviations. There was, therefore, considerably greater dispersion of the SCS-DAP scores than was the case for the JRS scores. For this reason, the relative small size of the group, or the homogeneity of the group, or both, did not appear to be sound explanations. The relative lack of dispersion on the JRS scores may have been the result of an overly cautious approach on the part of the clinician in scoring the rating scale. It is well recognized that rating scales in general lack in

accuracy and objectivity. In being aware of the research purpose of his single interview with the subjects in the validating study, the clinician may have been exceedingly cautious in evaluating the individuals for self-concept. This attitude could result in underrating those with mature self-concept and in overrating those with immature self-concept which would tend to cluster the scores around the mean.

The correlation, however, between the JRS and SCS-DAP (.61) was of sufficient magnitude to have considered the SCS-DAP a valid tool for the measurement of self-concept and to warrant its use in the major problem under consideration.

It will be recalled that in addition to the validation of the SCS-DAP the validating group was also used for the pilot research to determine whether or not a positive and significant relationship did exist between self-concept and the presence and absence of educational disability. The statistic employed to investigate this relationship was biserial correlation since one variable was continuous (SCS-DAP) while the others dichotomous (presence or absence of educational disability). The results of this study are listed in Table II. The correlation obtained (.60) was significant on the one per cent level of confidence. It can, therefore, be stated that a positive and significant relationship existed between SCS-DAP and the presence, or absence, of educational disability. These results were

sufficiently encouraging to pursue the major problem of this study since it is distinctly related to the main problem under investigation.

With the conclusion of the validation of the SCS-DAP, which consisted of thirteen categories, it was hypothesized that certain of these categories discriminated better than others between mature and immature self-concept. In order to investigate this hypothesis to further refine the SCS-DAP, the instrument was subjected to an item analysis. The mean scores of each of the categories in the upper and lower twenty-seven per cent of the group were retained in the revised form of the SCS-DAP. Table III shows the results of this investigation. In considering which categories should be retained and which categories should be eliminated it was decided to arbitrarily set the cut-off point at less than two points discrimination. In this way, the four categories of shading, mixed age, asymetry and detail in figure were eliminated in the final revision of the SCS-DAP. It can, of course, be speculated that were the revised form of the SCS-DAP correlated with the JRS that the magnitude of the relationship between these variables would be even greater. However, it was felt that the magnitude of the correlation obtained was of sufficient size to have validated the SCS-DAP without further investigation. An advantage of the revised form of the SCS-DAP was its greater accuracy and brevity.

Age Differences in the Relationship Between Self-Concept and Grade-Point Average

Hypothesis one stated that the relationship between self-concept and grade-point average increases in magnitude with an increase in age. The correlations obtained were .54 on the third grade level, .38 on the sixth grade level, and .72 on the eleventh grade level, all of which were significant on the one per cent level of confidence. These findings would indicate that a positive and significant relationship existed between self-concept and grade-point average. Furthermore, significant age differences, as shown by grade differences, can also be shown in this relationship.

The one tailed test of significance [15:258] employing Fisher's "t" was calculated to determine whether or not one correlation was significantly higher or lower than another. The two tailed test of significance [15:304-307] based on probability (p) was also calculated to determine whether or not the difference between these correlations was significant. These results are reported in Table V. There is no significant difference between the correlations obtained on the third and on the sixth grade levels. Neither is the third grade correlation significantly higher than the sixth grade correlation. It can, therefore, be stated that there is no significant age difference in the relationship between self-concept and GPA on the third and sixth grade levels. Thus, the hypothesis which stated that the relationship

between self-concept and grade-point average would increase in magnitude with an increase in age is not supported by the data for the two grade levels. Although there is a positive and significant relationship between self-concept and grade-point average on both grade levels, no significant age difference was displayed on these two grade levels.

Despite the lack of significant difference it will be noted that the sixth grade correlation (.38) tended to be somewhat lower than the third grade correlation (.54), although not significantly so. This study did not investigate the reason for this trend, but it is possibly due to the sixth grade children employing intellectual and personality components other than self-concept to a greater extent to attain grades than third graders. An inspection of the means of the SCS-DAP and the GPA revealed that they both gained the same size increment at the sixth grade level, which would lend support to the speculation that factors other than self-concept are employed to a greater extent on the sixth grade level in attaining marks.

When the one and two tailed tests of significance were applied to the third (.54) and eleventh (.72) grade correlations, the difference was found to be significant on the five per cent level. Further, the correlation for the eleventh grade was significantly higher than the correlation for the third grade on the five per cent level of confidence. Likewise, the difference in correlation on the sixth grade (.38) and on the eleventh grade (.72) was also significant,

this time on the one per cent level. In addition, the eleventh grade correlation was very significantly higher than the sixth grade correlation. It is thus apparent that a significantly greater difference in the relationship between self-concept and grade-point average existed on the sixth and eleventh grade levels then was found in the relationship between any of the other grade levels investigated.

It will be recalled that hypothesis one stated that the relationship between self-concept and grade-point average would increase in magnitude with an increase in age. This hypothesis was not supported by the results of the correlations on the third and sixth grades, but was somewhat supported by the results of the sixth and eleventh grades. In general, one can then say that there are significant age differences in the relationship between self-concept and grade-point average when one compares early elementary and senior high students, but that there is no age difference in this relationship between early and late elementary school subjects.

Sex Differences in the Relationship between Self-Concept and Grade-Point Average

Hypothesis two stated that sex differences in the relationship between self-concept and grade-point average will vary according to age. As an out-growth of this major hypothesis it was further hypothesized that (a) in the third grade level the relationship between self-concept and grade-point average will be greater for the male, (b) that on the

sixth grade level the relationship between self-concept and grade-point average will tend to be equal, and (c) that on the eleventh grade level the relationship between self-concept and grade-point average will tend to be equal.

The correlations obtained on the third grade level were .64 for the males and .34 for the females. Both correlations were significant, .64 on the one per cent level of confidence and .34 on the five per cent level of confidence. When the one and two tailed tests of significance were applied to these correlations, that obtained for the boys was found to be significantly higher on the one per cent level than that obtained for the girls (.32), although the difference between these two correlations was not significant. Therefore, hypothesis (a), which stated that on the third grade level the relationship between self-concept and grade-point average will be greater for the male, has been accepted.

The correlations obtained on the sixth grade level were .32 for the males and .27 for the females, both of which are significant on the five per cent level. When the one and two tailed tests of significance were applied no significant difference between these correlations was revealed, nor was the males' correlation significantly greater than for the females. It can therefore be said that hypothesis (b), which stated that on the sixth grade level the relationship between self-concept and grade point-average will tend to be equal for males and females, has been accepted.

The correlations obtained on the eleventh grade level were .57 for the males and .80 for the females and both of these correlations were significant on the one per cent level. When the one and two tailed tests of significance were applied to the correlations on the eleventh grade level the correlation obtained for the female pupils was found to be a significantly higher than the correlation obtained for the males on the five per cent level of confidence. The difference between the correlations was found to be significant on the one per cent level of confidence. Hypothesis (c), which stated that on the eleventh grade level the relationship between self-concept and grade-point average will tend to be equal for males and females, was not supported by the data and was in fact rejected by the data which indicated a very marked sex difference on the eleventh grade level in favor of the female pupils.

It will be recalled that the second major hypothesis stated that sex differences in the relationship between self-concept and grade-point average will vary according to age. This major hypothesis was supported by the data on all grade levels.

In general, one can say that there are significant sex differences when one compares early elementary pupils and also senior high school pupils, but that there is no significant difference in this relationship when one compares later elementary school pupils.

One can only speculate why hypothesis (c) was rejected by the data. It will be noted that on the eleventh grade level the mean SCS-DAP and GPA scores were of smaller magnitude for both males and females when compared with the means of the previous grade levels, but that the drop in GPA on the eleventh grade level is greater for the females than for the males. When this is combined with the very high correlation (.80) between self-concept and grade-point average for the female pupils on the elventh grade level this might indicate that they are using self-concept to a greater extent in the attainment of grade-point average to the same extent they relied on these factors on earlier grade levels. The correlation of .80 for the females on the eleventh grade level seemed to indicate quite definitely that female pupils on the eleventh grade level are perhaps not working as hard in school in the area of grade-point attainment as they did previously. While the female with an adequate self-concept appeared to be attaining grades as she had until now, the female with a less mature self-concept appears now to be solving her difficulties in ways other than striving in the area of grade-point attainment. For this reason, it might be speculated, the SCS-DAP discriminated to a much greater extent between higher and lower grade-point average in the case of the female pupil, since in her case self-concept appeared so much associated with grade-point attainment on the eleventh grade level. In contrast, while the mean of the SCS-DAP for the males on the eleventh grade level

decreased in magnitude approximately to the same extent as that of their female counterparts, the mean for the GPA for the males does not decrease nearly so much. This suggested that male pupils tend to a much greater extent than their female counterparts to employ personality and intellectual factors other than self-concept in grade-point attainment. While the correlation of .57 for the males on the eleventh grade level indicated a positive and significant relationship between self-concept and grade-point average, the very significant difference between the correlation for the males (.57) and females (.80) on the eleventh grade level suggested that the SCS-DAP discriminated to a significantly greater extent between high and low grade-point average for the females than for the males. It is possible that while earlier cultural pressures accented the male child's physical activity, the substitution of the reality principle by the senior high school level forces the male child to identify at least with certain aspects of the academic aims. This shift may be due in part to the male becoming aware of a world in which it is commonly thought that males can manipulate their social and economic situation through "brains," in which males assume dominance over females, in which men have to develop skills to prepare themselves to support a family in an economically competitive world, etc. It is possible that under the pressure of adolescent strivings it becomes even more important for the male individual to maintain a self-concept that is powerful, capable, resourceful,

independent, "smart," in a word, "masculine" and in this way he may well be stimulated to amass knowledge even more. The male's concern with social, occupational, and vocational areas and the greater stress placed on these areas by the school, perhaps motivates him still further to achieve, to master his environment. In contract, to the girl at the time of adolescence, the amassing of intellectual information may bring her into conflict with her culturally mirrored feminine strivings. This is not to say, however, that boys will necessarily excel over girls in grade-point average on the eleventh grade level, but the data pointed out that the boys' grade-point average on this grade level comes closer to that of their female counterparts, although still being somewhat lower. The experiencing of the adolescent conflict might, however, tend to decrease her interest in the strictly adacemic areas and perhaps to this extent might accentuate a concommittant increase in home and family subject areas, or it might result in a pre-occupation with activities and/or interest in areas relatively distant from the academic emphasis in the school milieu. The difference in the correlations on the eleventh grade in favor of the girls can possibly be explained on the basis of the above speculations.

An inspection of the data revealed that hypothesis 1, (a) and (b) have been supported. Hypothesis (c) was not supported by the data.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to investigate the age differences and sex differences in the relationship between self-concept and grade-point average. Two major hypotheses were formulated: (1) The relationship between self-concept and grade-point average increases in magnitude with an increase in age, and (2) sex differences in the relationship between self-concept and grade-point average varies according to age. As an outgrowth of the latter major hypothesis, it was further hypothesized that (a) on the third grade level the relationship between self-concept and grade-point average is greater for the male; (b) on the sixth grade level the relationship between self-concept and grade-point average will tend to be equal; and (c) on the eleventh grade level the relationship between self-concept and grade-point average tends to be equal for both boys and girls.

It was theorized that the self-concept evolves through the interaction of internal and external stimuli employing the processes of imitation, incorporation, and identification. These processes, which are initially motivated to allay

anxieties, became the processes through which the infant acquires (learns) modes of adaptation. Since learning is viewed as an adaptation to personal and socio-cultural demands, these processes become the prototype for all learning that is to follow. Any interference with mature self-concept development may, therefore, be reflected in disturbed learning processes with resultant learning problems in the formal school situation.

A review of the literature revealed no studies on the problem under consideration, nor any studies indirectly related to the problem of self-concept and grade-point average. The self has, in fact, only recently become an object of scientific inquiry. By and large, the literature has dealt with non-emotional factors in learning. Literature that dealt with personality and learning tended to concern itself with the composite personality organization of the child and, in the main, these were not tied in with the learning process. Studies on sex differences had only an indirect bearing on the problem. While sex differences have been investigated for almost every variable, sex differences in scholastic achievement were selected as the area nearest to the problem being investigated.

The instrument selected to measure self-concept was the Machover Draw-A-Person (SCS-DAP) test which was adapted and validated with a pilot group.

The investigation of the major problem included a research group of 300 subjects, evenly divided between the

sexes from the third and sixth grades of three public elementary schools and from the eleventh grade of a senior high school in Flint, Michigan. The SCS-DAP was administered to these subjects in their classrooms, the grade-point averages were calculated and the relationship between these variables determined. The significance of the relationships and the significance of differences between the relationships was calculated.

Conclusions

1. A significant positive relationship exists between self-concept and grade-point average on all grade levels ranging from the one to the five per cent level of confidence.
2. There are significant age differences as shown by certain grade differences in the relationship between self-concept and grade-point average. This was found to be true in comparing early elementary and senior high students and later elementary and senior high students, but there was no significant difference in this relationship between early and late elementary school levels.
3. There are significant sex differences for early elementary pupils and senior high school pupils, but there is no significant sex difference in this relationship for later elementary school pupils.

Implications of the Study

The study revealed age differences and sex differences between self-concept and grade-point average. These differences suggest that particular care needs to be given to factors that influence self-concept development especially for male students on the lower elementary school level and for female students on the senior high school level. It may be possible for some of the sex differences in the frame of reference and role expectations to be utilized more positively in the development of the self-concept of each of the sexes. It would appear that developing a curriculum that would result in the attainment of the opportunity for academic expression in ways consistent with the role expectations of males on third grade level and for females on the eleventh grade level would be particularly useful in facilitating favorable adjustment to school requirements.

Since individual adjustment to age and sex roles tends to be associated with grade-point average then it would appear that emotionally meaningful relations, or at least contact, with individuals in the school milieu which is conducive to positive identifications would assist in positive self-concept development. In this way it is possible that adaptation in general to the formal learning situation will be enhanced as well as making it more likely that the usual long range goals of the "socialization of the individual" will be achieved. For example, the availability of male

teachers for especially lower elementary grade males would appear particularly helpful.

Additional Research Indicated

1. The defining and investigation of personality sectors in their relationship to intellectual and other functioning holds promise for further studies. Particularly is the study of early or primary deprivation and its differential effects on personality adjustment an area for promising research.

2. Numerous studies have investigated the sex differences in scholastic achievement, but few have attempted to investigate the underlying factors that have determined these sex differences. Although the methodological problems are readily apparent, this area, nevertheless, holds promise as a fruitful one for scientific investigation.

3. The relationship between self-concept, general achievement test results, and grade-point averages poses another interesting area for investigation. A study of self-concept and arithmetic disability, self-concept and reading disability, and the investigation of self-concept in its relationship to other school subjects all present areas for further research.

4. Inherent in the relationship between self-concept and school achievement are the motivational factors as these are related to learning. A defining and investigation of these motivational patterns, and their age and sex differences

in their relationship to learning, holds promise of being further fruitful ground. From the magnitude of the relationships established, factors other than self-concept appear operative in the learning process. These may, or may not, be as important as self-concept in achievement and over-all adaptation.

5. The whole topic of self-concept appears of sufficient importance to warrant its further investigation by a variety of methodological approaches, including the technique employed in this study after its further refinement. What appears of particular importance is the relation between self-concept and adaptation. Since it appears from the present study that self-concept is often combined with learning difficulties, it would be interesting to investigate the effect of self-concept through an improvement in school adaptation achieved, for example, through tutoring, or some other individualized therapeutically geared program.

6. As implied earlier, the SCS-DAP is in need of further reliability study. This would indicate the magnitude of its error in its evaluation of self-concept and would convert it into a more reliable technique for self-concept evaluation.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Anastasi and Foley. Differential Psychology. New York: The MacMillan Company, 1954. 864 pp.

2. Anderson, John E. "The Theory of Early Childhood Education," National Society for the Study of Education, Yearbook XLVI, Part II, 1947, 77-100.

3. Anderson, Irving, H., and Walter F. Dearborn. The Psychology of Teaching Reading. New York: The Ronald Press Company, 1952. 334 pp.

4. Ayres, L. P. "Laggards in Our Schools," (New York: Russell Sage Foundation, 1909), p. 158, cited by Stroud, James B. Psychology in Education. New York: Longman, Green and Company, 1947. 644 pp.

5. Bender, Lauretta. "A Visual-Motor Gestalt Test and its Clinical Use," Research Monographs, Number 3. New York: American Orthopsychiatric Association, 1938. 165 pp.

6. Beres, David and S. J. Obers. "The Effects of Extreme Deprivation in Infancy on Psychic Structure in Adolescence: A Study in Ego Development," The Psychoanalytic Study of the Child. New York: International University Press, 1950, 5:212-234.

7. Biber, Barbara, Lois Murphy, Louis Woodcock, Irma Black. Child Life in School. New York: E. P. Dulton and and Company, Inc., 1942. 650 pp.

8. Blair, Arthur W., and William H. Burton. Growth and Development of the Pre-adolescent. New York: Appelton-Century-Crofts, Inc., 1951. 218 pp.

9. Blanchard, Phyllis. "Reading Disabilities in Relation to Difficulties of Personality and Emotional Development," Mental Hygiene, 20:384-413, July, 1936.

10. _____. "Attitudes and Educational Disabilities," Mental Hygiene, 13:550-563, 1929.

11. Blatz, W. E. and Helen Batt. "Studies in Mental Hygiene of Children," Pedagogical Seminary, 1927, pp. 552-602, cited by Blair, Arthur W. and William H. Burton, Growth and Development of the Pre-adolescent. New York: Appleton-Century-Crafts, Inc., 1951. 218 pp.

12. Blos, Peter. The Adolescent Personality. New York: D. Appleton-Dentury Company, 1941. 507 pp.

13. Chodorkoff, Bernard. "Adjustment and the Discrepency Between the Perceived and Ideal Self," Journal of Clinical Psychology, 10:266-268, July 1954.

14. Doughlas, Harl R., Newman E. Olson. "Relation of High School Marks to Sex in Four Minnesota High Schools," School Review, 12:283-288, April, 1937.

15. Edmiston, R. W. "Do Teachers Show Partiality?", Peabody Journal of Education, 20:234-238, May 1944.

16. Edwards, Allen L. Statistical Methods for the Behavioral Sciences. New York: Rinehard and Company, Inc., 1955. 470 pp.

17. French, Thomas M. "Psychoanalysis and Goal-Directed Behavior," in The Integration of Behavior, Volume I, The University Press, 1955. 239 pp.

18. Freud, Anna. "Psychoanalysis and the Training of the Young Child," Psychoanalytic Quarterly, 4:1935.

19. _____. The Ego and the Mechanisms of Defense. New York: International Universities Press, Inc., 1946. 193 pp.

20. _____. "Psychoanalysis and the Training of the Young Child," Psychoanalytic Quarterly, 4:72-187, 1935.

21. _____, D. T. Burlington. War and Children. International University Press, 1943.

22. Freud, Sigmund. The Problem of Anxiety. New York: Norton, 1936. 86 pp.

23. Gesell, Arnold, et al. The First Five Years of Life. New York: Harper and Brothers, 1940.

24. _____, Frances L. Ilg. Infant and Child in the Culture Today. New York and London: Harper and Brothers, 1943. pp. 363.

25. Goldfarb, W lliam. "Infant Rearing and Problem Behavior," American Journal of Orthopsychiatry, 10:123-218, 1940.

26. Hartman, Heinz. "Comments on the Psychoanalytic Theory of the Ego," in The Psychoanalytic Study of the Child. New York: International Universities Press, 5:74-96, 1950.

27. Hartman, Heinz, Ernst Kris, R. M. Loewenstein. "Comments on the Formation of Psychic Structure," in The Psychoanalytic Study of the Child, 2:11-38. New York: International Universities Press, 1947, 2:11-38.

28. Hoffer, Willie. "Development of the Body Ego," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1950, 5:18-23.

29. Hartshore, H., M.A. May, and F. K. Shuttleworth. Studies in the Nature of Character, Volume III: Studies in the Organization of Character. New York: Macmillan Company, 1954. 864 pp.

30. Jacobson, Edith. "The Self and the Object World," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1954, 9:75-127.

31. Johnson, George. "Failure of High School Students in St. Louis," American School Board Journal, 91:42-45, November, 1935.

32. _____. "Girls Lead in Progress Through School," American School Board Journal, 17:24-27, October 1937.

33. Josselyn, Irene M. Psychosocial Development of Children. New York: Family Service Association of America, 1953. 126 pp.

34. Klein, Emanuel. "The Reluctance to Go to School," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1945, 1:263-279.

35. _____. "Psychoanalytic Aspects of School Problems," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1949, 3/4:369-388.

36. Kramer, Paul. "On Discovering One's Identify: A Case Report," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1955, 10:47-74.

37. Lawson, Doughlas E. "Teachers' Marks--Tragic and Absurd," Educational Forum, 4:175-179, January, 1940.

38. Levy, John and Ruth Monroe. The Happy Family. New York: Alfred A. Knopf, Inc., 1938. Cited by Blair, Arthur W., and William H. Burton, Growth and Development of the Pre-Adolescent. New York: Appleton-Century-Crofts, Inc., 1951. 218 pp.

39. Liss, Edward. "Emotional and Biological Factors Involved in Learning Processes," American Journal of Orthopsychiatry, 5:126-131, 1935.

40. Liss, Edward. "Learning--Its Sadistic and Masochistic Manifestations," American Journal of Orthopsychiatry, 10:123-218, 1940.

41. _____. "Emotion and Learning," American Journal of Orthopsychiatry, 7:483-488, 1937.

42. _____. "Examination Anxiety," American Journal of Orthopsychiatry, 4:343-348, 1944.

43. _____. "Motivation in Learning," in The Psychoanalytic Study of the Child. New York: International Universities Press, 1955, 10:100-116.

44. Machover, Karen. "Human Figure Drawings of Children," Journal of Projective Psychology, 17:85-91, March, 1953.

45. _____. Personality Projection in the Drawing of the Human Figure. Springfield, Illinois: Charles C. Thomas, Publisher, 1950. 194 pp.

46. Mahler, M. S. "Ego Psychology Applied to Behavior Problems." Cited by N.D.C. Lewis, and B. L. Pacella. Modern Trends in Child Psychiatry. New York: International Universities Press, 1945, pp. 43-56.

47. McGeoch, John A., and Arthur L. Irion. The Psychology of Human Learning. New York: Longmans, Green and Co., 1953. 581 pp.

48. McGeoch, John A. The Psychology of Learning. New York: Longmans, Green and Co., 1948. 609 pp.

49. Munroe, Ruth L. Schools of Psychoanalytic Thought. New York: The Dryden Press, 1955. 644 pp.

50. Murphy, Murphy and Newcomb. Personality. New York: Harper and Brothers, 1947.

51. Olson, Willard C. Child Development. Boston, D. C. Heath and Company, 1949. 386 pp.

52. Parsons, Talcott. "Age and Sex in the Social Structure of the United States," American Sociological Review, 7:605-615, 1942.

53. Pierson, Gerald H. J. Psychoanalysis and the Education of the Child. New York: W. W. Norton and Company, Inc., 1954. 346 pp.

54. Ribble, Margaret A. The Rights of Infants. New York: Morning side Heights, 1943. 110 pp.

55. Ryan, H. H. "Do Boys Get Short Changed?" Clearing House, 18:557-558, May 1944.

56. Scheinfeld, Amram. Women and Men. New York: Harcourt, Bruce and Company, 1944. 453 pp.

57. Schinnerer, Mark C. "Failure Ratio: Two Boys to One Girl," Clearning House, 18:557-558, May 1944.

58. Sherif, Muzafer, and Hadley Cantril. The Psychology of Ego Involvements. New York: John Wiley and Sons, 1947. 354 pp.

59. Shilder, Paul. The Image and Appearance of the Human Body. New York: International Universities Press, 1950. 304 pp.

60. Slotkin, J. S. Personality Development. New York: Harper and Brothers, 1952. 390 pp.

61. Spitz, Rene. "Psychiatric Therapy in Infancy," American Journal of Orthopsychiatry, 20:623-633, 1950.

62. Stroud, James B. Psychology in Education. New York: Longmans, Green and Co., 1947. 644 pp.

63. Swenson,Clifford. "Packing the Honor Society," Clearing House, 20:521-524, May 1942.

64. _____ and Sipprelle, Carl N. "Some Relationships Among Sexual Characteristics of Human Figure Drawings," Journal of Projective Psychology, 20:224-226, June, 1956.

65. Symonds, P. M. The Ego and the Self. New York: Appleton-Century-Crofts, Inc., 1951. 191 pp.

66. _____. Dynamic Psychology. New York: Appleton-Century-Crofts, Inc., 1949. 399 pp.

67. Wexler, Murray and Jules D. Holzberg. "A Further Study in the Validity of Human Form Drawings," Journal of Projective Psychology, 16:249-251, June, 1952.

68. Young, Kimball. Social Psychology. New York: Appleton-Century-Crofts, Inc., 1949. 558 pp.

APPENDICES

APPENDIX A

JUDGE'S RATING SCALE

The Judge's Rating Scale employed with the validating group consisted of the five categories described below.

Judge's Rating Scale for Self-Concept

1	2	3	4	5
Immature Self-Concept				Mature Self-Concept

It will be noted that only the extreme categories of the Judge's Rating Scale were labeled while the middle categories were not. This was done to insure that a high score would correspond with a mature self-concept and a low score would correspond with an immature self-concept. Each of the five elements that were defined in this study as being components of self-concept were rated on the above scale and thus resulted in five ratings for each subject.

APPENDIX B

INSTRUCTIONS FOR THE ADMINISTRATION OF THE SCS-DAP

The SCS-DAP was administered to the subjects in their classrooms. Care was taken to observe that all the situational requirements inherent in any good testing situation would be present. For example, external distractions were eliminated, ventilation and lighting was adequate, etc. In order to avoid any particular "set," or bias, in connection with the drawing, the teacher was not informed regarding the specificy of the research problem. She was merely advised that her class would be employed in a research project.

Eight and one-half by eleven inch white paper and pencils were provided. The subjects were asked to print their name, grade and school on one side of the paper and then were requested to turn the paper over in order to have available a completely free page on which to proceed with their drawing. Instructions were then read as follows:

> I am interested in finding out some things about children and their drawings. I would like you to draw a picture of a person for me. Please draw all of the person. If you like you may erase. Be sure to draw all of the person.

The subjects were permitted to have as much time available to them as they needed to complete the task. In no case was a time limit imposed. Adequate time was set

aside for the drawing to insure sufficient time for everyone. Questions were answered by the examiner. Care was taken, however, to avoid any discussion, or response to questions, that would in any way direct, advise, or in any way influence the subject's drawing. The only comment relevant to the drawing made by the examiner was that the whole person should be drawn. Within this structure the subjects had complete freedom to proceed with their production.