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THE RELATIONSHIP BETWEEN THE SELF-CONCEPT, THE BODY-IMAGE
AND THE MOVEMENT-CONCEPT OF COLLEGE FRESHMEN WOMEN WITH
LOW AND AVERAGE MOTOR ABILITY

by

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CHAPTER I

INTRODUCTION

Man has always been concerned about himself. He constantly tries to determine those forces in operation which influence him in the ever-changing process of life; he wonders who he is and what he can be; he wonders how he is influenced and how he can influence.

Early in life, man begins to acquire a self - an individuality he will someday call "me" and "I" and connote by these words the unique values, ideals, attitudes, beliefs and feelings that make him what he is.

Man learns that his self is not something he alone determines; environmental forces which he cannot always control change and mold his being. His actions take on the characteristics of his immediate environment - he is in action with the family, the socio-educational group of which he is a part, and with the individuals within these groups. He becomes an active participant in the lifelong process of adjustment but all the time his actions and reactions are formulated in terms of self.

By virtue that he has life, man must have a physical being. With his body he is able to communicate through movement. He may accomplish this through speech or with gestures and physical expression. His body may be a source of satisfaction when he successfully meets the challenge of a physical task; he may be pleased with the way he looks and moves. On the other hand, man may be dissatisfied with his body - he sees himself as too short, too fat or too ugly and the presentation of his

physical being to the world, through his only avenue of expression, movement, becomes a source of concern and anxiety.

One cannot help but wonder about the interrelationship between the self-concept and the body-image and its resultant influence on the movement of the individual. The dichotomy of mind and body, without due consideration of movement, seems insufficient in describing the total man.

In studying the totality of man, the student of human behavior is quick to realize the important role of perception. It is not adequate to consider how the individual performs or how he reacts to situational experiences as viewed by the outsider; the important point is how the individual perceives himself as the performer or reactor - how he perceives himself in the triad of self-body-movement.

Since the formative years are spent in school, the broad purpose of education is to affect change within the individual. In order to fulfill its purpose, education must provide the individual with opportunities for individual growth, for examination and reexamination of beliefs and attitudes and for the acquisition of knowledges pertinent to his goals.

The educational process is an exercise in human relations for the purpose of providing the individual with knowledge and fostering individual growth. In order for learning to occur some form of interaction must take place between the student and the teacher. In terms of this interaction, the student may perceive the lesson as unimportant or unrelated to his immediate goals, he may perceive himself as incapable of performing the required task or he may perceive the teacher as

mechanical or unfeeling and therefore unable to understand that he, the student, has a problem. At this point, the geography lesson or math problem under discussion is irrelevant.

Thus, in the physically limited space called the classroom, the learning that takes place and its resultant change of the individual rarely can be measured in terms of lessons covered or test grades. The real measure of success or failure in the classroom would be one of determining the impact of personality upon personality. More specifically, if it were possible to measure the change in these terms, it would be the impact of the instruction on the self system of the individual student.

Today's curriculum, reflecting the influences of the technological time, provides the student with an abundance of intellectual exercises. His intellect, usually to the exclusion of the body and its movement, is valued for its ability to abstract, to symbolize, to create and to interrelate. The student may find himself a specialist or a professional with all the necessary mechanical skills for success in his respective field but somewhat lacking in the skill of relationships with others. He may have difficulty in a cooperative situation or he may be ineffective as a leader. He may discover later that he is bored and is unable to utilize leisure time effectively and for pleasure. These thoughts may reflect themselves in the individual's self system to the point where performance is affected.

A preventative measure seems to lie within the physical education of the individual. This is not to say that physical education is the cure-all for the maladies of the times for it will never make leaders out of those who do not wish to lead or champions out of those who do

not wish to compete. But, physical education as an educational discipline, has much to offer the individual. In the gymnasium or on the athletic fields the individual can learn about himself as a moving being capable of untold physical acts. He can continue to learn about the wondrous mechanism of his body through actual experience with movement. This experimentation with movement can take him from a basic pattern such as walking to the highly complex act of propelling his body through space. He begins to understand the meaning of strength, endurance, coordination and fatigue.

The individual also learns through participation in games and sports. He learns about teamwork and what it is like to be with or against another group. This experience provides him with an opportunity to learn about himself as the winner or the loser and to gain valuable insight into what this means in terms of his self-concept.

It is the purpose of this investigation to explore the relationship between the concepts of self, body-image and movement. Perhaps, as a result of this effort, new insights will be gained regarding the function of the total organism as the individual perceives himself in these three spheres.

CHAPTER II

STATEMENT OF THE PROBLEM

This study was undertaken for the purpose of investigating the relationship between motor performance, the self-concept, the body-image and the movement-concept of college freshmen women with low and average motor ability.

Subjects for this study were freshmen women enrolled at the Woman's College of the University of North Carolina during the academic year 1961-62. The subjects were chosen at random after they had been classified as having low or average motor ability as measured by the three item Scott Motor Ability Test.

Measures for determining self-concept, body-image and movement-concept were based on Q-sort methodology.

CHAPTER III

REVIEW OF LITERATURE

As an heir, even though he were heir to the treasure of all the world, nevertheless does not possess his property before he has come of age, so even the richest personality is nothing before he has chosen himself, and on the other hand even what one might call the poorest personality is everything when he has chosen himself; for the great thing is not to be this or that but to be oneself.

Søren Kierkegaard

Self-Concept

The literature concerned with the self-concept reveals that the bulk of work in this area of human behavior has been done by the psychologists. In the reported discussions of the self, theorists have found it necessary to construct broad self theory systems, with equally broad definitions; for the self, as used in most studies, refers to how the individual perceives himself in all facets of his life. In other words, the self as an object in action rather than a subject or initiator of action.

The theorists endorsing this view, as listed by Wylie (13) are impressive. Perhaps the best known is Rogers (9) who, with his colleagues, has done extensive research in the area of self-concept; especially the changes brought about in the perception of self as a result of psychotherapy. Other theorists who have accorded a central role to the self are Lecky (8:85) and Combs and Snygg (1:17).

Lecky, in his discussion of personality development stated:

The personality develops as a result of actual contacts with the world, and incorporates into itself the meanings derived from external contacts. Essentially, it is the organization of experience into an integrated whole.

In support of this concept, Combs and Snygg have stated that:

People do not behave according to the facts as others see them. They behave according to the facts as they see them. What governs behavior from the point of view of the individual himself are his unique perceptions of himself and the world in which he lives, the meanings things have for him.

One of the difficulties with research based on these theories is the matter of concise operational definitions. Since the theories are broad, by necessity, the researcher is left to his own devices in formulating hypotheses, definitions and measuring instruments. The research situation is further complicated by the vast array of theories, none of which have received systematic research over a sufficient period of time.

Investigation of the literature reveals research efforts concentrated in general areas. Bugenthal and Zelen (17:492) investigated the self-concept by using the W-A-Y technique which consisted of having one hundred thirty-four students answer the question, "Who Are You?" three times. The validity of the test, as stated by the authors:

. . . lies in the delineation of the object of investigation, the expressed self-perceptions of the client . . . the method cannot . . . seek to do other than secure and analyze that which a subject says about himself.

Jervis (21) seeking to define a positive self-concept used a self description inventory (SDI) consisting of sixty items rated on

a five point scale. The subject rated from two viewpoints; as he describes himself and as he would ideally like to be. Jervis postulated that the sum of the discrepancies between the two scores would yield a measure of self-concept.

Research has been conducted relating the self-concept to feelings toward others and the acceptance of others. Relevant studies are those of Stock (31), Scheerer (28) and Phillips (26). The conclusions drawn mainly revealed that there is a definite relationship between the way the subject looks at self and looks at others and his attitude toward self and attitude toward others.

McQuitty (23) used the self-concept as a criterion in measuring personality integration in terms of acceptance-rejection attitudes. His assumption was that the individual has contradictory attitudes about the self because of a psychical disintegration. He utilized the pattern of responses to items on a personality inventory to yield a diversity score.

Nahinsky (24) in his study of the relationship between the self-concept and the ideal self-concept as a measure of adjustment used a forced-choice inventory of one hundred statements. His subjects completed three sorts of the statements: (1) describe self, (2) describe "typical Navy Officer" and (3) describe "ideal career Navy Officer." He concluded that the degree of discrepancy between the self-concept and the ideal self-concept is a measure of self-esteem.

Studies using children as subjects have been reported by Perkins (25), Hill (19) and Jersild (6). Perkins, testing the hypothesis that children in a group centered climate will show greater congruency between the

self-concept and the ideal-self than children in a teacher centered climate found mainly that children will register a positive and significant change toward greater congruency between the self-concept and the ideal-self, in time. Hill's main finding was that attitudes toward self seem to improve with chronological age.

Jersild, using compositions written by children, high school students and college students on the topic of what they liked and disliked about themselves, found that high school students describe themselves in terms of physical characteristics more than college level students. He also found that among college students things liked about themselves were described in physical characteristics more than what they disliked about themselves.

The validity and accuracy of self-estimate has been subjected to study by Brandt, Holt and Shen.

Brandt's conclusions (15:94) regarding the accuracy of self-estimate were:

1. Between-individual variation in accuracy of self-estimate was significantly greater than within-individual variation. Accuracy seems to depend more on self-structure than the nature of the perceived characteristic.
2. Boys are more accurate than girls in estimating academic and physical performance.
3. Both overrate, boys more than girls.
4. "Accepted" more accurate than the "not accepted."
5. Self accuracy increases with age, it is a developmental thing.

Holt (20) testing the accuracy of self-evaluations used self-ratings of thirty-five needs and criterion ratings by a Diagnostic Council. He found slight and insignificant tendencies to overrate the highly valued needs and to underrate the less valued needs. He also noted that

the greatest discrepancies between the ratings by the experimenter and the subject seemed attributable to a lack of clear definition of the variables.

Shen (30:105-6) investigating the validity of self-estimates used a rank-self and rank-others method on eight variables. He concluded:

1. There is a tendency to rank self in a group less accurately than we rank our friends.
2. There was a tendency to overestimate.
3. The constant tendency of self-estimate depends more upon the individual than the trait. The individual over or underestimated the self on all traits. No one trait on which all individuals over or underestimated.

From the above, one sees that the bulk of investigation in psychology has been on the self as an isolated entity. One study was found relating the self to the body-image and it will be mentioned in the section on body-image. No studies were found relating the self-concept to the body-image and movement.

Several works in the area of perception have been indirectly related to self theory. Postman, Bruner and McGinnies (27) investigating personal values, as related to perception of words flashed on a screen, stated that the subject seemed to have a lower threshold in recognizing words which had a high value for him. They also reported the subject had difficulty in recognizing words that were threatening to his value system.

Ittleson (4:19), by way of definition, stated the following about perception and the individual:

. . . perceiving is that part of the process of living by which each one of us from his own particular point of view creates for himself the world in which he has his life's experiences and through which he strives to gain his satisfaction.

Asch and Witkin (14:326) in their study of space orientation made the following noteworthy comment:

Of unusual interest in the study of orientation is the fact that it involves the manner in which the person relates himself to the world about him. As he perceives the position and direction of other objects, so does each person also perceive his own position and direction. To what extent is the body localized as other objects are and to what extent does its special relation to the subject play a role? The exploration of this question may cast light on the relation of perceptual functions to features of personality organization.

The best summary statement, giving significance, in correct proportion to all aspects of the individual self-system is that from Combs and Snygg (1:21).

The perceptual field is the universe of naive experience in which each individual lives, the everyday situation of the self and its surroundings which each person takes to be reality. To each of us the perceptual field of another person contains much error and illusion; it seems an interpretation of reality rather than reality itself; but to each individual, his phenomenal field is reality; it is the only reality he can know. This perceptual field is far richer and more meaningful than that of the objective, physical world. We do not live in a world of objects without meaning. On the contrary, we invest the things about us with all sorts of meaning; these meanings are for each of us the reality to which we respond.

Body-Image

Bodies are after all not isolated entities. The body and the body image are always the body and the body image of a personality which expresses itself in the body. The body image is never an isolated part of our existence but is a part of every experience. The human personality is a personality with a body which expresses itself in the body image and only on the basis of the understanding of the body image can we understand the personality fully. Paul Schilder

The body-image has been of interest to many researchers in the fields of neurology, psychiatry and psychology. As discussed by Fisher and Cleveland (3), much of the work came about as a result of clinical phenomenon which could not be explained by these disciplines. The sensation of phantom limb as experienced by the amputee is a notable example as is the distortion of body image as reported by patients after suffering a cerebral hemorrhage. In some cases, the distortion may be so great that the patient "loses" the paralyzed side in his thinking about his body. One theory advanced as an explanation is that the pre-trauma body-image of the individual has not come into adjustment with the present physical status.

This thinking implies the existence of a body-image previous to the trauma. Researchers set out to explore the formation and relationship of this body-image to the individual. Jersild (6:65) reported that William James had coined the phrase of "body-image" and gave it a place in the total self picture.

In speaking of the "physical self" William James used an apt expression to call attention to the fact that a person's physical features have an important place in his concept of himself. The expression "body image" has also been used to denote physical aspects of the self picture.

Linn (22:37), in his discussion of developmental aspects of the body-image stated that the face, in terms of how the individual perceives his body, holds the most important position in the total image; for it was the first part of the anatomy to actively interact with the environment.

The face more than any other part of the body is the area through which we establish contact with fellow human beings, via speech and facial expression.

Secord and Jourard (29:343) in their investigation of body-cathexis, or the feelings of satisfaction or dissatisfaction an individual has about his body and its functions, make the following introductory comment:

One object which is ever-present in this personal world is the body. It is the thesis of the present writers that the individual's attitudes towards his body are of crucial importance to any comprehensive theory of personality

In order to test their thesis they devised a body-cathexis scale and a self-cathexis scale. The items in each scale, forty-six for body-cathexis and fifty-five for self-cathexis, were rated by the subjects on a five point scale. Secord and Jourard also utilized a test containing seventy-five homonyms relating to body parts and bodily functions and twenty-five neutral words in a projective technique. The words were read to the subject and he was instructed to write down the first word that came to mind. The score on this test was based on the number of responses to the seventy-five homonyms. These two tests were administered to seventy college men and fifty-six college women. Another group of subjects containing forty-seven college men and women were given the body-cathexis and self-cathexis scales and the Maslow Test of Psychological Security-Insecurity. As a result of this study, Secord and Jourard concluded:

1. Split-half reliabilities of the two parts of the scale were found to be satisfactory: .81 for body-cathexis and .90 for self-cathexis.
2. The hypothesis that feelings about the body are commensurate with feelings about the self was

supported by significant correlation between the two parts of the scale.

3. The hypothesis that low body-cathexis is associated with anxiety in the form of undue autistic concern with pain, disease or bodily injury was upheld by the demonstration of significant relation between low body-cathexis as determined by the scale and by the homonym test.
4. The hypothesis that low body-cathexis is associated with insecurity was sustained by the demonstration of correlation between the former and the Maslow test.

As is emphasized with regard to self-concept, the importance of perception by the individual is also emphasized by theorists in the area of body-image. Schilder (10), Jersild (5), and Kolb (7) are specific in their mention of this view.

The image of the human body means the picture of our own body which we form in our mind, that is to say the way in which the body appears to ourselves. (10:11).

Throughout life a person's view of himself is influenced by his perception of his body and its properties, his strength and skill in physical activities. (5:94).

Attitudes toward the body also derive from the individual's perceptions, comparisons and identifications with the bodies of other persons. Usually, children who are accepted by and conform to their family and cultural expectations for them neither over or under-evaluate their body. (7:753).

Although investigators from many research disciplines have dealt with the idea of a body-image and have related it to many variables, there appears to be little, if any, research relating body-image to movement of the body.

Movement-Concept

Nearly everything in the curriculum is charged with psychological meaning when viewed from the

standpoint of what it might do to help learners find themselves, realize their potentialities, use their resources in productive ways and enter into relationships which have a bearing on their ideas and attitudes toward themselves.

Arthur T. Jersild

If the purpose of education in its broadest context, is to affect change within the individual, then the individual in his totality must be considered.

The teacher of academic subject matter utilizes books, visual aids, machines, lectures and his personality in his attempt to influence the student. The teacher and the student interact in the classroom, within the frame of reference of the subject matter, and are subject to, in the final analysis, the harsh judgment of success or failure. Perception of the self may be modified negatively or positively but, nevertheless, it is modified.

Most educational disciplines are theoretically committed to the enhancement of the individual and his personality. All too often the student of English learns about himself from the point of view of how he performs in the English class. He learns from the same viewpoint in mathematics, chemistry, social science or any other academic class of which he is a member. The educational efforts exerted toward modifying and molding the intellect are tremendous. If one subscribes to the dichotomous relationship of mind and body, then physical education is left with the responsibility for "educating" the body.

The role of movement in life is an important one; for it is through movement that the individual communicates with this environment via all the creative modalities, relates to others through speech and gesture

and achieves a degree of physical performance, which in our society, earns him a place on the skilled-unskilled continuum.

Previous discussion has substantiated the intimate relationship between the self-concept the body-image. And yet, no mention of movement as related to these two variables has been found by the investigator.

To date, research in physical education has been confined largely to the study of performance, skill and the physiological changes resulting from the performance of physical tasks under varying conditions. The literature abounds in studies relating to motor ability, motor performance, physical fitness and the movement experience of various groups. Although it may not be considered research, in its strictest scientific sense, the descriptive literature from the field of dance education lends considerable support to the importance of the total movement experience to the individual.

Lecky, in his theory of self-consistency, cautions the researcher against isolating physical acts when investigating the total behavior of the organism.

A motor pattern is meaningless except in terms of a line of direction toward a goal. But if the separate acts are themselves treated as units, we lose sight not only of the organism as a whole, but what is even more important, of the unity of the behavior itself. (8:29)

The phrase, movement-concept, as used by the investigator does not appear in the literature. It is used here to denote that view an individual has of himself as a physically mobile entity; a view which is influenced by the self-concept and the body-image as known only to the individual.

This particular view is not unique to this investigator. The triad of self-body-movement is philosophically supported by many physical educators. However, the everyday practice of physical education seems to emphasize the mechanical and physiological aspects of the program with little consideration of what this does to the self.

The physical education program especially abounds in psychological possibilities. In it children can learn to discover and accept their bodies, to face up against false and prudish attitudes of shame and guilt which some of them have learned to associate with nakedness. Here they can discover, try and test their capacity for acquiring enjoyable skills; here they can learn to recognize their competitive tendencies and the healthy as well as the morbid features of competition. Here they are introduced to a psychological laboratory in which they see, in raw form, acts of meanness, cruelty, and hostility which are symptomatic of emotional poverty or mental conflict; and they can observe behavior which reflects good sportsmanship, greatness of defeat, ability to "take it", and behavior which reveals a self rich in resources and inner assurance. (6:103-4)

Although Brandt (16:31-3) relates the following to his discussion of the self, it is the investigator's opinion that each statement can have its implications for the body and movement.

1. The urge to learn seems to be inherent in the human organism.
2. People strive toward feeling comfortable.
3. Acceptance helps a person to grow and change.
4. Changes in self depend on changes in perception.
5. An individual strives toward consistency and integration of the self.
6. Significant change in behavior occurs only with change in self.

CHAPTER IV

PROCEDURES

Selection of Test

After careful investigation of the literature and consultation with psychologists from the Woman's College of the University of North Carolina, Duke University and the University of North Carolina at Chapel Hill and a sociologist from the Woman's College of the University of North Carolina, the Q-sort technique as described by Stephenson (12) was selected as the best available procedure for this study. Some of the factors influencing this selection were:

1. Interpretation of the test items is left to the subject rather than placing a value judgment on the items and imposing this on the subject.
2. Q-sort methodology yields a clear measure, in the form of a correlation, between the self and the ideal self.
3. The correlation between the self and the ideal self of one test, i.e., self-concept, can be compared to the correlation between the self and the ideal self of other tests, i.e., body-image.
4. The Q-sort is easy to administer, score and correlate.

Q-sort methodology consists of giving the subject a set of statements typed on cards. The subject is instructed to sort the cards into a predetermined number of piles containing a predetermined number of statements on the basis of how well each statement relates to a particular view she holds of herself. Although the number of statements used for a particular study may vary, the arrangement of the statements will always approximate a normal distribution.

In this study a set of seventy-five statements was used. The left-hand side of the nine point scale was labeled "least like" and the right-hand side was labeled "most like". According to the pre-determined distribution of the statements, based on the normal curve, the subject was forced to choose two statements which were "least like" her and, therefore, placed under number one, the next five statements which were placed under number two and so on across the scale. When the subject had completed the sort of seventy-five statements, she had differentiated all statements on the basis of how well they applied to a particular view she held of herself.

The distribution of statements, on a nine point scale, was as follows:

	STATEMENT VALUE								
	1	2	3	4	5	6	7	8	9
NUMBER OF STATEMENTS	2	.	.	.	.	.	.	.	2
		5	.	.	.	.	.	5	
			9	.	.	.	9		
LEAST LIKE				13	.	13			MOST LIKE
					17				

Q-sorts may be accomplished in this manner in a variety of investigational situations depending on the purpose of the study. Since this study was primarily concerned with how the college freshman with low or average motor ability perceived the self and the self-ideal in three areas, the subject was instructed to do the self-sort from the point of view of how she saw herself at that exact moment in time and the ideal-sort from the point of view of how she would ideally like to be.

In order to facilitate the testing procedure as well as the recording procedure, boards were constructed for this purpose. Three boards, twenty-eight inches by thirty-six inches were cut from three-eighths inch Masonite. One and one-quarter inch, seventeen gauge wire brads were driven through the Masonite and angulated upwards to prevent the card from slipping off the brad once it was placed there. Spacing for the brads was determined to be one and one-half inches apart in a columnar arrangement.

The rough side of the Masonite was sprayed with coppertone Japalac enamel. Numbers, one through nine, were painted above the columns to indicate their value. The phrase, "least like" was painted under columns one, two and three and the phrase "most like" was painted under columns seven, eight and nine. This procedure was accomplished on both sides of all three boards. A diagram of the board may be found in the Appendix.

Angled slots were cut in blocks of wood, twelve inches by three inches by three-quarters inch. The blocks were used to maintain the board in an upright position.

The statements were typed on biology filler paper cut to a size of one and one-half inches by two and one-half inches. A hole was punched at top center for placing the card on the brad. Each card was numbered to match its corresponding number on the master list of statements. The lists of statements for each of the three tests appear in the Appendix.

Six copies of statements were completed for each of the three tests. Two sets were used by each subject; one for the self-sort and the other for the ideal-sort. Two sets of statement cards were numbered on the back

with one, two or three, one set in red and the other set in green. This was a precautionary measure in the event that both sets of statements from one board became mixed up.

Self-Concept Sort

Eighty-seven of the original one hundred Q-sort items devised by Butler and Haigh and used by Rogers (9) in his investigation of changes in the self-concept as a result of psychotherapy were collected. Correspondence with Dr. Rogers produced a self-concept Q-sort statement list containing eighty statements which had been revised by Dr. John Shlien. The items relating to sex were deleted because it was felt they did not have a direct relationship to this study. Five statements were dropped leaving a self-concept Q-sort of seventy-five statements.

Body-Image and Movement-Concept Sorts

The investigator then faced the problem of constructing Q-sorts for body-image and movement-concept containing seventy-five statements each. Even though Q-sort methodology theoretically permits the investigator to construct his own statements without submission to the jury procedure or any other procedure involving experts, it was decided a more sound approach to the construction of the Q-sorts would be to write a group of statements and submit them to a seven-man jury. The jury selected was composed of four female physical educators, one male psychiatrist, one male psychologist and one male sociologist, all from the Woman's College of the University of North Carolina.

The jury was requested to judge the statements on the basis of their relevancy to the study in helping a college freshman evaluate her

own body-image and movement-concept. Each judge was provided with a list of one hundred fifty statements, a score sheet and instructions containing the five point rating scale. A sample of this evaluation form appears in the Appendix. One judge, the psychologist, was not included in the ratings since he did not feel that he was able to interpret the terminology without additional clarification.

The rating given to each statement by each judge was recorded. Statements were accepted if rated three or higher, on the five point scale, by four or more judges. One hundred eighteen statements were retained. An additional fifty-six statements were then constructed. The one hundred seventy-four statements were typed on small cards and were submitted to a jury of three female physical educators. The judges were instructed to sort the statements into three groups; statements relating to body-image, statements relating to movement and statements which did not clearly fit into either category. Statements were accepted as belonging to a particular category if two or more of the judges placed it there.

Tabulation of the judges ratings yielded the following:

Body-image statements	58
Movement statements	80
Irrelevant statements	5
Statements discarded because of insufficient rating	31
	<hr/>
Total	174

An additional twenty-eight statements were constructed and were submitted to the same jury. They were instructed to separate the

statements into the same three groups. Tabulation of their ratings yielded the following:

Body-image statements	25
Movement statements	0
Irrelevant statements	3
Statements discarded because of insufficient rating	0
Total	<u>28</u>

This procedure produced eighty movement statements and eighty-three body-image statements. Seventy-five statements were drawn at random from each group to complete the Q-sorts.

Construction of the Nomograph

Q-sort methodology, because of its forced distribution requirement, permits the use of a nomograph for determining the correlation coefficients between the self-sort and the ideal-sort.

In any given Q-technique research, the denominator of the fraction is a constant, K , for all the correlations to be performed, since both N , the number of statements, and σ^2 , the variance of the forced frequency distribution of scale values, are constant.

$$r = 1 - \frac{\sum D^2}{K}$$

For any given correlation, the $\sum D^2$ is readily found and substituted for the arithmetic computation of r . Cohen (18:138-9).

A nomograph was constructed for use in this study. It was drawn after completing the following procedures.

x	f	d	fd	fd ²
1	2	+4	8	32
2	5	+3	15	45
3	9	+2	18	36
4	13	+1	13	13
5	17	0	0	0
6	13	-1	-13	13
7	9	-2	-18	36
8	5	-3	-15	45
9	2	-4	-8	32

252

$$\sigma^2 = \frac{\sum fd^2}{N-1} = \frac{252}{74} = 3.4054$$

$$K = 2N\sigma^2 = 2 \times 75 \times 3.4054 = 510.81$$

The constant, K, was determined to be 510.81. Starting at the lower left corner and proceeding upwards, a scale from 0 to K was marked off in units of fifty on a piece of graph paper. A similar scale, starting at the lower right corner and proceeding upwards, was drawn on the right. The value of this scale ranged from K to 2K. The correlation coefficient scales were marked off in units of tenths on the top and bottom of the nomograph. The negative correlation coefficient scale, ranging from -.00 to -1.0, running from left to right appears at

the top. The positive correlation coefficient scale appears on the bottom of the nomograph. It ranges, beginning at the left and proceeding to the right from +1.0 to +.00.

A diagonal line was drawn from the lower left corner to the upper right corner. To read r , the correlation coefficient, for any sum of D^2 from 0 to K , the nomograph is entered from the left at the level of the D^2 sum. By proceeding to the diagonal line and then down the value of r is read off the positive scale. If the sum of D^2 is within the K to $2K$ range the nomograph is entered from the right and the value of r is read off the top (negative) scale.

Selection of Subjects

Freshman women enrolled at the Woman's College of the University of North Carolina for the academic year 1961-62 were given the Scott Three Item Motor Ability Battery during freshman orientation week in September. The raw scores for the three items; obstacle race, basketball throw for distance and broad jump for distance were converted into T-score values. Each individual was assigned a motor ability score based on performance and the regression equation designed by Scott (11:356).

Three hundred thirteen names and motor ability scores were collected from four physical education instructors. This information was transferred to small cards and separated into the following groups according to the motor ability score.

Low (44 and below)	96
Average (45 through 56)	118
High (57 and above)	80
Discarded because of incomplete record	19
Total	<hr/> 313

Twenty names were drawn at random and without replacement from the low and average groups. Of the original forty subjects, one in the average group and one in the low group had withdrawn from school during the first month of the semester. One subject in the low group was disqualified by the investigator because of age. Replacements from the appropriate groups were drawn and included in the study.

Each of the forty individuals were contacted in their dormitory by the investigator. The study was explained in detail and questions relating to participation in the study were answered. At no time was information withheld from the subjects. All forty individuals contacted agreed to participate in the study.

After second semester had begun, the subjects were contacted by letter requesting that they indicate three times during the week when they were free to participate in the study. A schedule card containing the investigators schedule was provided for this purpose. Return addressed envelopes were included for the subjects' convenience.

A master testing schedule was made after the cards were returned. An attempt was made to give each subject her first choice of times. Subjects were scheduled for one one-hour period a week for three weeks. They were contacted by letter indicating the time, dates and place of testing.

Administration of Tests

The subjects came to a room in the Rosenthal Gymnasium which was picked for testing. All testing was done by the investigator. The Q-sort boards and appropriate set of statements were ready for the

subject when she arrived. Three different sorts were accomplished at the rate of one per week. The testing order was as follows:

1. Self-concept sort.
2. Body-image sort.
3. Movement-concept sort.

Preceding the first sort (self-concept) the subjects were given specific instructions for doing the sort. These instructions appear in the Appendix. The type of sort, either self or ideal, was emphasized. The second (body-image) and third (movement-concept) sorts were accomplished after reviewing the original instruction in less detail. In all three tests the self sort was done first.

When the subject finished the self sort, of the particular test, the entire Q-sort board was turned around so the ideal sort could be done. This enabled the investigator to score the self sort while the ideal sort was being completed. A copy of the scoring form appears in the Appendix.

Scoring of each test was done by recording the rating, one through nine, given each statement by the subject. The self and ideal sorts for each test were recorded on the same sheet. Results of the self sort were recorded in black using the letter "S" and the ideal sort was recorded in red using the letter "I". At the end of the testing period each subject had three score sheets, one for each of the tests.

The difference between the self and the ideal score for each of the seventy-five statements in the test were determined and recorded on the score sheet in the column marked "D". This discrepancy score was then squared and recorded in the "D²" column.

In order to facilitate the computation of the " D^2 " total, the tally of each discrepancy score, i.e., zero, one, two, etc., was recorded. These tallies were added as a check for the total number of statements. The total had to be seventy-five. After completing this check the discrepancy score was squared and multiplied by the tally. These scores were summed to yield the " D^2 " total.

The correlation coefficient for each individual's test was read from the nomograph. It was entered at the level of the " D^2 " total, crossed to the diagonal and then proceeding up or down, depending on the " D^2 " total, to the appropriate r scale. A ten inch plastic triangle was used for this purpose.

The above procedures were completed for each subject on each of the three tests.

CHAPTER V

ANALYSIS AND INTERPRETATION OF DATA

The purpose of this study was to investigate the relationship between the self-concept, body-image and movement-concept of college freshmen women with low and average motor ability.

Subjects for this study were freshmen women enrolled at the Woman's College of the University of North Carolina during the academic year 1961-62. The subjects were chosen at random after they had been classified as having low or average motor ability as measured by the three item Scott Motor Ability Test.

ANALYSIS OF DATA

Q-sorts for self-concept, body-image and movement-concept were completed by each of the forty subjects. The correlation coefficient between the self-sort and the ideal-sort for each subject on each of the three tests was completed. Data were organized into two groups representing subjects with low and average motor ability. These data are presented in Table VI and Table VII in the Appendix.

The correlation coefficients based on the self-sort and the ideal-sort have been considered as scores rather than as correlation coefficients throughout the statistical manipulation of the data.

Null hypotheses were formulated regarding relationships or differences between groups and within the entire group on the variables measured.

The Pearson-Product Moment Method was used to correlate the items in the following hypotheses. The level of confidence of r was determined by the use of the table in Edwards (2:408). It was decided that relationships significant at the five per cent level or below would be an acceptable standard at which to reject the hypotheses.

The null hypotheses were:

1. There is no relationship between the following in the low motor ability group.
 - a. Self-concept : Body-image.
 - b. Body-image : Movement-concept.
 - c. Movement-concept : Self-concept.

The hypothesis was rejected at the one per cent level of confidence between Self-concept : Body-image and at the five per cent level of confidence between Body-image : Movement-concept. No significant relationship was found between Movement-concept : Self-concept. The data with regard to these relationships appear in Table I

2. There is no relationship between the following in the average motor ability group.
 - a. Self-concept : Body-image.
 - b. Body-image : Movement-concept.
 - c. Movement-concept : Self-concept.

The hypothesis was rejected at the five per cent level of confidence for the relationship between Self-concept : Body-image and Body-image : Movement-concept. No significant relationship was found between Movement-concept : Self-concept. These results are presented in Table I

3. There is no relationship in the entire group between the following.
 - a. Motor ability : Self-concept.
 - b. Motor ability : Body-image.
 - c. Motor ability : Movement-concept.
 - d. Self-concept : Body-image.
 - e. Body-image : Movement-concept.
 - f. Movement-concept : Self-concept.

TABLE I

CORRELATION COEFFICIENTS BETWEEN SELF-CONCEPT : BODY-IMAGE,
 BODY-IMAGE : MOVEMENT-CONCEPT AND MOVEMENT-
 CONCEPT : SELF-CONCEPT IN THE LOW AND
 AVERAGE MOTOR ABILITY GROUPS

Test	Low	Average
Self-concept : Body-image	.5723*	.4964**
Body-image : Movement-concept	.4807**	.4820**
Movement-concept : Self-concept	.3321	.4303

*Significant at the one per cent level of confidence.

**Significant at the five per cent level of confidence.

The hypothesis was rejected at the five per cent level of confidence for the relationship between Motor ability : Movement-concept. It was also rejected at the one per cent level of confidence for relationships between Self-concept : Body-image and Body-image: Movement-concept. No significant relationship was found between Motor ability : Self-concept, Motor ability : Body-image and Movement-concept: Self-concept. These results appear in Table II.

Fisher's "t" Test of Significance of Difference between Means was used to calculate the difference between motor ability groups in the next null hypothesis. The level of confidence of "t" was determined by use of the table in Edwards (2:407).

4. There is no difference between the low and average motor ability groups with regard to:
 - a. Self-concept.
 - b. Body-image.
 - c. Movement-concept.

The hypothesis was rejected at the one per cent level of confidence for Movement-concept. No significant difference between groups was found for Self-concept and Body-image. These results appear in Table III.

Fisher's "t" Test of Significance of Difference between Correlated Means was used to calculate the difference between variables in the remaining null hypotheses. The level of significance of "t" was determined by use of the table in Edwards (2:407).

5. There is no difference between the following scores regardless of motor ability.
 - a. Self-concept : Body-image.
 - b. Body-image : Movement-concept.
 - c. Movement-concept : Self-concept.

TABLE II

CORRELATION COEFFICIENTS BETWEEN MOTOR ABILITY : SELF-CONCEPT,
 MOTOR ABILITY : BODY-IMAGE, MOTOR ABILITY : MOVEMENT-
 CONCEPT, SELF-CONCEPT : BODY-IMAGE, BODY-IMAGE :
 MOVEMENT-CONCEPT AND MOVEMENT-CONCEPT : SELF-
 CONCEPT IN THE ENTIRE GROUP

Test	r
Motor ability : Self-concept	-.1236
Motor ability : Body-image	.0673
Motor ability : Movement-concept	.3710**
Self-concept: Body-image	.4905*
Body-image : Movement-concept	.4498*
Movement-concept : Self-concept	.2717

*Significant at the one per cent level of confidence.

**Significant at the five per cent level of confidence.

TABLE III

SIGNIFICANCE OF DIFFERENCE BETWEEN THE LOW AND AVERAGE
MOTOR ABILITY GROUPS WITH REGARD TO SELF-CONCEPT,
BODY-IMAGE AND MOVEMENT-CONCEPT

Test	Mean Score Low	Mean Score Average	"t"
Self-concept	.6343	.5680	.9808
Body-image	.4422	.4590	.1836
Movement-concept	.3666	.5947	2.7383*

*Significant at the one per cent level of confidence.

The hypothesis was rejected at the one per cent level of confidence for Self-concept : Body-image and at the five per cent level of confidence for Movement-concept : Self-concept. No significant difference between scores was found for Body-image : Movement-concept. These results are presented in Table IV.

6. The scores of Self-concept, Body-image and Movement-concept are not significantly different from each other in both the low and average motor ability groups.
 - a. Self-Concept : Body-image.
 - b. Body-image : Movement-concept.
 - c. Movement-concept : Self-concept.

The hypothesis was rejected at the one per cent level of confidence between Self-concept : Body-image and Movement-concept : Self-concept in the low motor ability group. No significant difference was found in the low motor ability group between Body-image : Movement-concept. In the average motor ability group the hypothesis was rejected between Body-image : Movement-concept at the five per cent level of confidence. No significant difference was found in this group between Self-concept : Body-image and Movement-concept : Self-concept. These data appear in Table V.

TABLE IV

SIGNIFICANCE OF DIFFERENCE BETWEEN SELF-CONCEPT : BODY-IMAGE,
 BODY-IMAGE : MOVEMENT-CONCEPT AND MOVEMENT-CONCEPT :
 SELF-CONCEPT IN THE ENTIRE GROUP

Test	Mean Difference	"t"
Self-concept: Body-image	.1505	3.8101*
Body-image : Movement-concept	-.0301	-.6487
Movement-concept : Self-concept	-.1205	-2.5315**

*Significant at the one per cent level of confidence.

**Significant at the five per cent level of confidence.

TABLE V

SIGNIFICANCE OF DIFFERENCE BETWEEN SELF-CONCEPT : BODY-IMAGE,
 BODY-IMAGE : MOVEMENT-CONCEPT AND MOVEMENT-CONCEPT :
 SELF-CONCEPT IN BOTH THE LOW AND AVERAGE
 MOTOR ABILITY GROUPS

Test	Mean Difference Low	"t"	Mean Difference Average	"t"
Self-concept : Body-image	.1921	3.5706*	.109	1.8891
Body-image : Movement-concept	.0756	1.1649	-.1357	-2.3118**
Movement-concept : Self-concept	-.2677	-5.0320*	.0267	.4635

*Significant at the one per cent level of confidence.

**Significant at the five per cent level of confidence.

INTERPRETATION OF DATA

Several interesting trends appear when the significant data are considered as a pattern.

The significant relationship found in the Self-concept : Body-image correlation for both the low and average motor ability groups and for the entire group seems to indicate an existing relationship between the two variables. By broad interpretation this may indicate that the subjects probably perceived themselves in the dichotomous relationship of "mind and body".

A significant relationship was found for both groups and the entire group when the Body-image : Movement-concept correlation was studied. Again, broad interpretation may indicate that the subjects were able to perceive themselves as having a body that moves.

The absence of a significant relationship between the Movement-concept : Self-concept in both groups and in the entire group may indicate that the subjects see little, if any, relationship between the self and movement. In other words, the subjects may see themselves as individuals with a self and a body and with a body that moves but they do not see a relationship between self and movement.

The absence of a significant relationship between motor ability and the self-concept and the body-image is not surprising in light of the above results. However, the significant relationship between motor ability and the movement-concept is pertinent. This finding would seem to indicate that the actual motor performance on items such as are included in the Scott Motor Ability Test are influenced by how the subject perceived herself as a moving being or the possibility that motor ability

so influences conceptualization that movement becomes an integral part of the individual's self.

A similar trend appears when the low and average motor ability groups were compared with regard to self-concept, body-image and movement-concept. No significant difference was found between the groups regarding self-concept and body-image. A significant difference was found between the groups in movement-concept at the one per cent level of confidence. This may suggest that movement, or perceiving oneself as an adequate mover was more characteristic of the average motor ability group than of the low motor ability group.

Considering the correlations between Self-concept : Body-image, Body-image : Movement-concept and Movement-concept : Self-concept for the entire group, significant differences were found between Self-concept : Body-image and Movement-concept : Self-concept. No significant difference was found between Body-image : Movement-concept. In light of these results it appears that the subjects saw themselves more favorably in terms of the self and ideal self relationship for self-concept than they did for body-image. They also saw themselves more favorably in terms of self-concept than the movement-concept.

The two groups were then treated individually on these same variables. In the low motor ability group significant differences were found between Self-concept : Body-image and Movement-concept : Self-concept. No significant difference was found between Body-image : Movement-concept. In this group, all measures involving the self-concept were statistically significant at an acceptable level of confidence. It is of particular interest that the highest correlations between the self-sort and the ideal-sort were in the sphere of self-concept.

The results from the average motor ability group were exactly opposite those of the low motor ability group. The only significant difference was found between Body-image : Movement-concept. Once again, these data seem to indicate that movement or a movement-concept was important to this group. One may speculate that the subjects in this group were "freer" to move or to perceive themselves as moving beings. This may be due to successful physical performance in the past which has given rise to a degree of confidence in movement.

These findings are well supported by empirical reasoning. Fields such as psychiatry, psychology, sociology and physical education have based much of their theory and teaching on an existing relationship between the psychological and physical aspects of the individual and the interaction of these two elements with the environment. This investigation lends scientific support to the empirical belief in the relationship between self, body and movement.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the relationship between the self-concept, body-image and movement-concept of freshmen women with low and average motor ability. All subjects were freshmen women enrolled at the Woman's College of the University of North Carolina during the academic year 1961-62. The subjects were classified as having low or average motor ability according to their performance on the three item Scott Motor Ability Test.

Q-sorts for self-concept, body-image and movement-concept were completed by each of the forty subjects. Correlation coefficients between the self-sort and the ideal-sort on the three variables for the forty subjects were accomplished by use of a nomograph.

Null hypotheses were formulated regarding relationships or differences between groups and within the entire group on the variables measured. The statistical analysis offered support to the assumptions that:

1. There is a relationship between Self-concept : Body-image and Body-image : Movement-concept. This may indicate that the subjects were able to perceive themselves as a self with a body and with a body that moves.
2. The absence of a significant finding between Movement-concept : Self-concept may indicate that there is little,

if any, relationship in the subject's conceptualization between the self and movement.

3. The significant relationship between motor ability and movement-concept may indicate that actual motor performance on items such as are included in the Scott Motor Ability Test were influenced by how the subjects perceived themselves as moving beings.

Fisher's "t" Test of Significance of Difference between Means was used to calculate the difference between motor ability groups with regard to self-concept, body-image and movement-concept. The findings, supported by statistical data, indicate that no difference was apparent between the two groups except with regard to movement-concept. This would seem to indicate:

1. Movement has more meaning to the average motor ability group.
2. Perceiving oneself as a moving being is more characteristic of the average motor ability group than the low motor ability group.

Fisher's "t" Test of Significance of Difference between Correlated Means was used to calculate the difference between variables in the remaining null hypotheses concerned with differences among self-concept, body-image and movement-concept. Statistical inference lends support to the belief that:

1. The subjects saw themselves more favorably in terms of self-concept than they did when the body-image was considered.

2. The subjects saw themselves more favorably in terms of self-concept than in terms of movement-concept.
3. The subjects in the low motor ability group perceive the sphere of self-concept as being the one in which they come closest to their ideal self.
4. The views held by the low motor ability group regarding movement may be influencing their motor performance.
5. Subjects in the low motor ability group may be compensating in the sphere of self-concept for their lack of ability in other spheres.
6. Movement is important to the average motor ability group.
7. The average motor ability subjects perceived themselves as coming closest to their ideal self in movement.

CRITIQUE AND SUGGESTIONS FOR FURTHER STUDY

The investigator feels that Q-sort methodology lends itself nicely to research concerned with how individuals perceive themselves in various aspects of behavior. Of course, the inevitable question arises as to whether or not the subject was "honest" in her evaluation of the self and the ideal self. The investigator can only assume that she was. Imposed values, so inherent in many research techniques, are non-existent in Q-sort technique. The statements take on value only in the mind of each individual subject.

The statements in the body-image and movement-concepts Q-sorts warrant further study. Since the judges for these statements were all female physical educators, the Q-sorts represent only their views of these two concepts.

Considering the results of this study it might be interesting to:

1. Investigate the relationship between self-concept, body-image and movement-concept in subjects with low, average and high motor ability.
2. Investigate the changes that occur within a group of subjects with low motor ability. A study done on a group of individuals, such as those found in a basic skills course, over the period of one semester might prove of interest.
3. Investigate the changes that occur in body-image and/or movement-concept as a result of various activity courses. Several areas of interest might be dance, body-mechanics, basic skills, swimming and stunts and tumbling.

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BIBLIOGRAPHY

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APPENDIX

JUDGES EVALUATION FORM

Please judge the following statements for their appropriateness in helping a college freshman evaluate her own movement and body-image.

Rating Scale

- 5 - Very pertinent to the evaluation.
- 4 - Pertinent to the evaluation.
- 3 - Neutral.
- 2 - Vaguely related to the evaluation.
- 1 - Does not relate to the evaluation.

An answer sheet is attached for your convenience. I would appreciate receiving them by Friday 19 January 1962. Thank you for your cooperation.

ORIGINAL INSTRUCTIONS FOR TAKING THE Q-SORT

1. You will be given a packet of seventy-five statements.
2. Sort the statements into three piles.
 - A. On the left the statements which are "least like" you.
 - B. An in between pile of statements.
 - C. On the right the statements which are "most like" you.
3. There are seventy-five pegs on the board arranged in nine columns. The values of the pegs range from one to nine. Statements which are "least like" you will be placed toward the number one side of the board. Statements which are "most like" you will be placed toward the number nine side of the board.
4. Place the statements on the board according to their proper value as you see it.
5. Statements in each column have the same value regardless of their order.
6. You will complete two sorts.

Sort One

Sort the statements from the point of view of how you see yourself at this exact moment in time. This is called the self-sort.

Sort Two

Sort the statements from the point of view of how you would ideally like to be. This is called the ideal-sort.
7. Are there any questions.

Q-SORT STATEMENTS
SELF-CONCEPT

1. I express my emotions freely.
2. Most of my troubles are not my own fault.
3. I feel happy much of the time.
4. I feel secure within myself.
5. It's quite important for me to know how I seem to others.
6. I put on a false front.
7. I often feel that I want to give up trying to cope with the world.
8. I have confidence in myself.
9. I am kept going by hopes for the future.
10. I have courage -- the willingness to keep trying.
11. I usually like people.
12. I am a strong, competent person.
13. I am full of life and good spirits.
14. I feel free and unhampered.
15. I can stand up for my rights if I need to.
16. My decisions are not my own. I feel controlled by others.
17. I am liked by most people who know me.
18. I am ashamed of myself.
19. I have some originality or inventiveness in me.
20. I don't remake myself to satisfy each person who is important to me.
21. I have initiative. I can get started on my own.
22. It takes every thing I've got just to keep going.
23. If I can't have perfection, I don't want anything. Nothing in between will satisfy me.
24. I am shy.
25. Basically I like myself.
26. I am no one. I am not a person in my own right.
27. I am fearful, often dreading what may happen.
28. My energies and abilities are fully available to me.
29. I am intelligent.
30. I have a feeling I'm just not facing things.
31. I am different from others.
32. I forgive easily -- don't hold grudges or try to "get even".
33. I tend to feel envy at other people's good fortune.
34. I have to protect myself with excuses, with rationalizing.
35. I am satisfied with myself.
36. I am worth being loved.
37. I shrink from facing a crisis or a real hard test of myself.
38. I understand myself.
39. I have a feeling of hopelessness.
40. I often feel resentful.
41. I feel helpless.
42. I am disorganized.
43. I am too much the result of past experiences to hope for much change.
44. I feel inferior.
45. I am a failure.

46. I am emotionally mature.
47. I am confused.
48. I am optimistic.
49. I am pretty sociable, and really enjoy being with people.
50. I get pleasure out of life.
51. I am critical of people.
52. I am superior to most other people.
53. I get upset when old and familiar things are changed.
54. I'm a pretty calm and relaxed person. Few things really bother me.
55. I generally am fortunate.
56. I am really self-centered -- don't care much about other people.
57. It is pretty hard to really be myself.
58. I am usually an aloof, reserved person.
59. I do care for others and want them to be happy.
60. I am an angry, hostile person.
61. I live largely by other people's values and standards.
62. I really am disturbed -- close to the breaking point.
63. I often feel guilty.
64. I trust my emotions.
65. I am kind and gentle.
66. I have warm emotional relationships with others.
67. I just have to drive myself to get things done.
68. I am a submissive person.
69. I feel able to make up my own mind and stick to it if I want to.
70. I am adaptable. A strange situation is not a crisis to me.
71. I just wish I could be someone else, and forget all about me.
72. I just can't tell anyone my real feelings.
73. I feel adequate.
74. I am a pretty stable person.
75. I am conscientious and honorable -- can be depended upon.

Q-SORT STATEMENTS
BODY-IMAGE

1. I am good looking.
2. I enjoy having my picture taken.
3. I feel uneasy when I sit facing a group.
4. Heels make my legs look better.
5. I usually wear flat heeled shoes.
6. I am particular about the length of my skirts and dresses.
7. I am sophisticated.
8. People notice me when I enter a room.
9. I often notice people staring at me.
10. I enjoy looking at myself in the mirror.
11. Being well dressed is important to me.
12. I can appear sophisticated when I want to.
13. I dislike fat people.
14. I inherited my body build and therefore cannot do much about the way I look.
15. I enjoy being a girl.
16. I am concerned about the shape of my legs.
17. I get upset when my face breaks out.
18. I feel sorry for people who are homely.
19. My complexion has never been a problem.
20. Having a clear complexion is important to me.
21. I feel sorry for the girl who has a skin problem.
22. Physical activity is important to me.
23. My shoulders are broad.
24. I have good posture.
25. I feel most comfortable doing small restricted movements.
26. I am poised.
27. I am muscular.
28. I feel good in the clothes I wear.
29. I often wished I looked like someone else.
30. My physical appearance bothers me.
31. I often think about how I appear to others.
32. I look like an average person.
33. I wish I could wear the kind of clothes other girls wear.
34. I like to wear tight fitting clothes.
35. I wish I could do something about my size.
36. I am ashamed of my appearance.
37. I have big feet.
38. It is important for me to know I am physically attractive.
39. Weight control is difficult for me.
40. I think a lot about my physical appearance.
41. I am underweight.
42. I have nice teeth.
43. I have skinny arms.
44. I usually weigh more than I think I do.
45. I like to dress up because it gives me a good feeling.

46. My hair has always been a problem to me.
47. My hands are strong.
48. I have thick ankles
49. I have expressive eyes.
50. My smile is warm and friendly.
51. I am sensitive about my size.
52. I am awkward.
53. I am well proportioned physically.
54. I spend a great deal of time on personal grooming.
55. Comments made in a group about physical appearance usually bother me.
56. I like to be told how I look.
57. I really don't care how I look.
58. I usually wear tight fitting sweaters.
59. I rarely think about my body.
60. I look good in shorts.
61. I feel fat.
62. I am too tall.
63. I have heavy thighs.
64. I look good in a bathing suit.
65. I like to talk about my appearance.
66. People are judged by their physical appearance.
67. I have ugly legs.
68. I have skinny legs.
69. My physical size makes me stand out.
70. I have big hips.
71. I like to learn about my body.
72. I am satisfied with the way I look.
73. I have small muscles.
74. I have big bones.
75. I am physically attractive.

Q-SORT STATEMENTS
MOVEMENT-CONCEPT

1. I am able to push a heavy object (like a piano) without difficulty.
2. My movements are described as slow.
3. Hanging by my arms is difficult for me.
4. I cannot keep up with the class when we do sit-ups.
5. Fine movements (like typing) are difficult for me.
6. Modern dance scares me.
7. I have difficulty getting my arms and legs to work together when I swim.
8. I like to move to music.
9. I take average size steps when I walk.
10. I have difficulty with balance when standing on one leg.
11. I doubt my ability to make baskets when playing basketball.
12. I feel discouraged about my physical ability.
13. I like to do stretching type exercises.
14. I try to get out of physical activity.
15. I have stiff joints.
16. Physical activity has always been important to me.
17. I feel hopeless when playing a game.
18. I am afraid to swim in deep water.
19. I fatigue easily.
20. I judge my physical performance by the best players in the class.
21. I can move as well as anyone.
22. I feel adequate when playing volleyball.
23. I really don't move well.
24. Sports scare me.
25. I feel confident about being able to learn new physical activities.
26. I feel embarrassed when doing exercises.
27. I am able to do heavy physical work.
28. I prefer doing things with my hands.
29. I like difficult physical tasks.
30. Jumping is no problem for me.
31. Physical fitness is unimportant to me.
32. I learn physical skills easily.
33. I throw a ball with accuracy.
34. I am able to meet the physical demands of everyday living.
35. I can be described as an energetic person.
36. I like to do big sweeping movements.
37. I usually use the handrail when going down the stairs.
38. I have difficulty climbing up a rope.
39. I stumble a lot when walking.
40. I have no difficulty carrying a wooden chair.
41. I like to do flowing kinds of movements.
42. I have difficulty with exercises which require me to move my arms and legs at the same time.
43. I like to swim.
44. I have fun playing on a team.
45. I like people who are active.

- 46. I make strong physical demands on myself.
- 47. I feel good when I move.
- 48. I am usually not able to do as well as others on the team.
- 49. I am physically fit.
- 50. I am easily discouraged when learning new movements.
- 51. I have difficulty catching large objects.
- 52. I can bounce a ball with ease.
- 53. I am interested in knowing how I perform physically.
- 54. I am really a good player.
- 55. I drop things.
- 56. I have trouble remembering dance steps.
- 57. I feel awkward when carrying large objects.
- 58. I perform best when doing small coordinated movements.
- 59. I like sports where I play against one other person.
- 60. I usually lose at sports.
- 61. I bowl with ease.
- 62. Controlling the ball in bowling is no problem for me.
- 63. I am a good swimmer.
- 64. I am afraid of falling.
- 65. My movements are inhibited.
- 66. I am average in physical skill.
- 67. I like to do hard physical work.
- 68. I like to be active.
- 69. I frequently bump into things.
- 70. My movements are brisk and sharp.
- 71. I have no difficulty keeping time with the music when I dance.
- 72. I feel helpless when faced with a physical task.
- 73. I have always been proud of my physical ability.
- 74. Physical activity bothers me. I would rather do something else.
- 75. I am well coordinated.

TABLE VI
 SUBJECTS WITH LOW MOTOR ABILITY
 CORRELATION COEFFICIENTS BETWEEN SELF AND IDEAL SELF Q-SORTS

Subject Number	Motor Ability	Self-Concept	Body-Image	Movement-Concept
1.	44	.368	.283	.685
2.	42	.649	.722	.228
3.	41	.694	.480	.587
4.	39	.762	.369	.405
5.	31	.757	.748	.694
6.	31	.550	.157	.494
7.	41	.795	.835	.652
8.	33	.688	.738	.460
9.	38	.446	.262	-.213
10.	41	.770	.835	.467
11.	42	.732	.561	.633
12.	44	.421	.093	-.205
13.	41	.730	.085	.182
14.	41	.560	.058	.516
15.	38	.770	.869	.580
16.	44	.765	.350	.111
17.	36	.803	.485	.474
18.	44	.570	.675	.210
19.	39	.645	.072	.012
20.	42	.210	.167	.360

TABLE VII
 SUBJECTS WITH AVERAGE MOTOR ABILITY
 CORRELATION COEFFICIENTS BETWEEN SELF AND IDEAL SELF Q-SORTS

Subject Number	Motor Ability	Self-Concept	Body-Image	Movement-Concept
1.	50	.379	.254	-.030
2.	54	.520	.378	.537
3.	54	.640	.730	.581
4.	50	.323	.437	.650
5.	50	.545	.450	.738
6.	47	.780	.538	.674
7.	47	.312	-.112	.012
8.	48	.400	.100	.570
9.	51	.833	.531	.654
10.	56	.610	.668	.805
11.	50	.688	-.101	.730
12.	53	.702	.514	.614
13.	53	.729	.572	.612
14.	56	.730	.732	.885
15.	55	.688	.660	.745
16.	48	.057	.610	.522
17.	53	.885	.770	.891
18.	47	.781	.696	.460
19.	51	.030	.080	.644
20.	53	.728	.673	.600

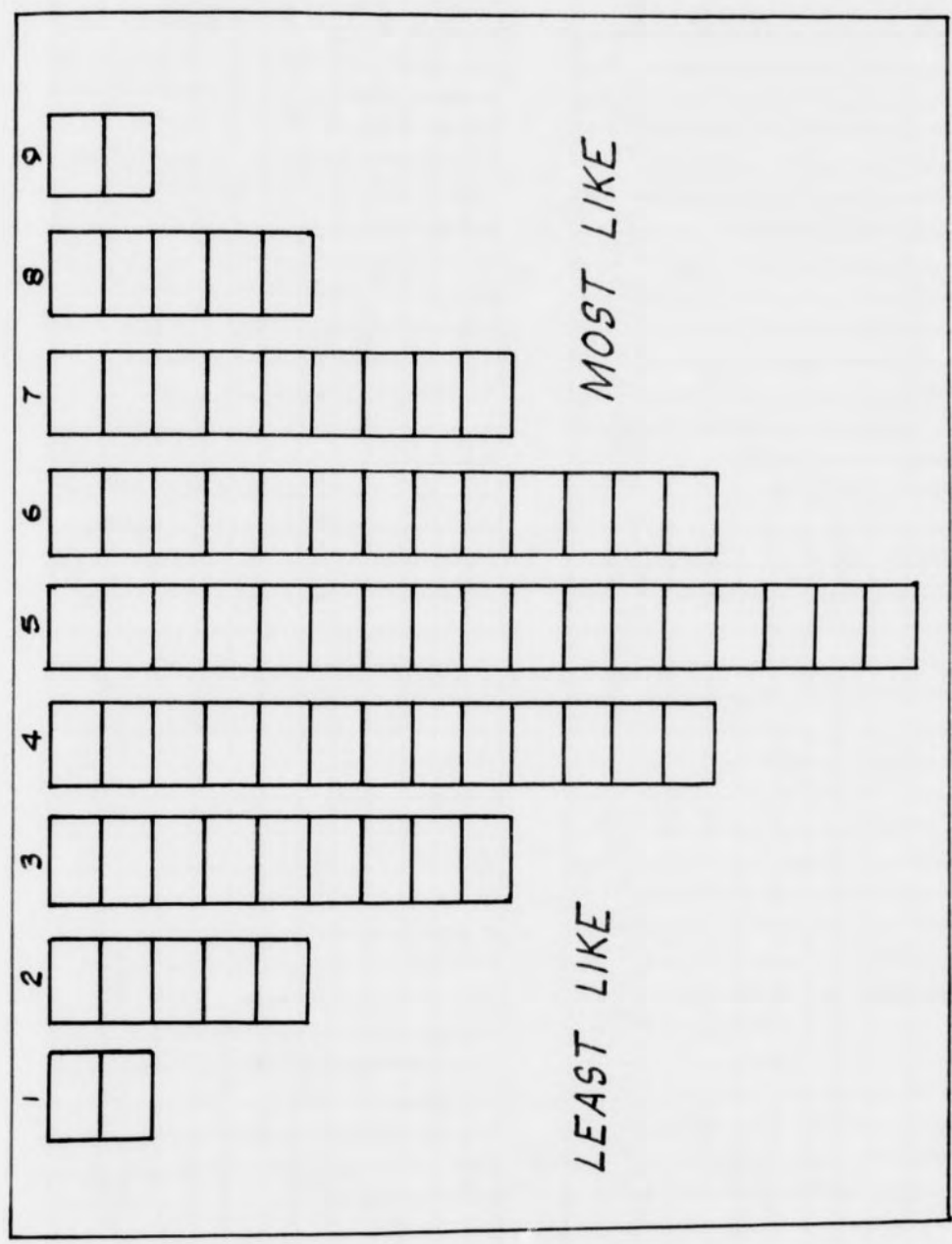


FIGURE I
Q-SORT BOARD

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FIGURE II
SCORE SHEET

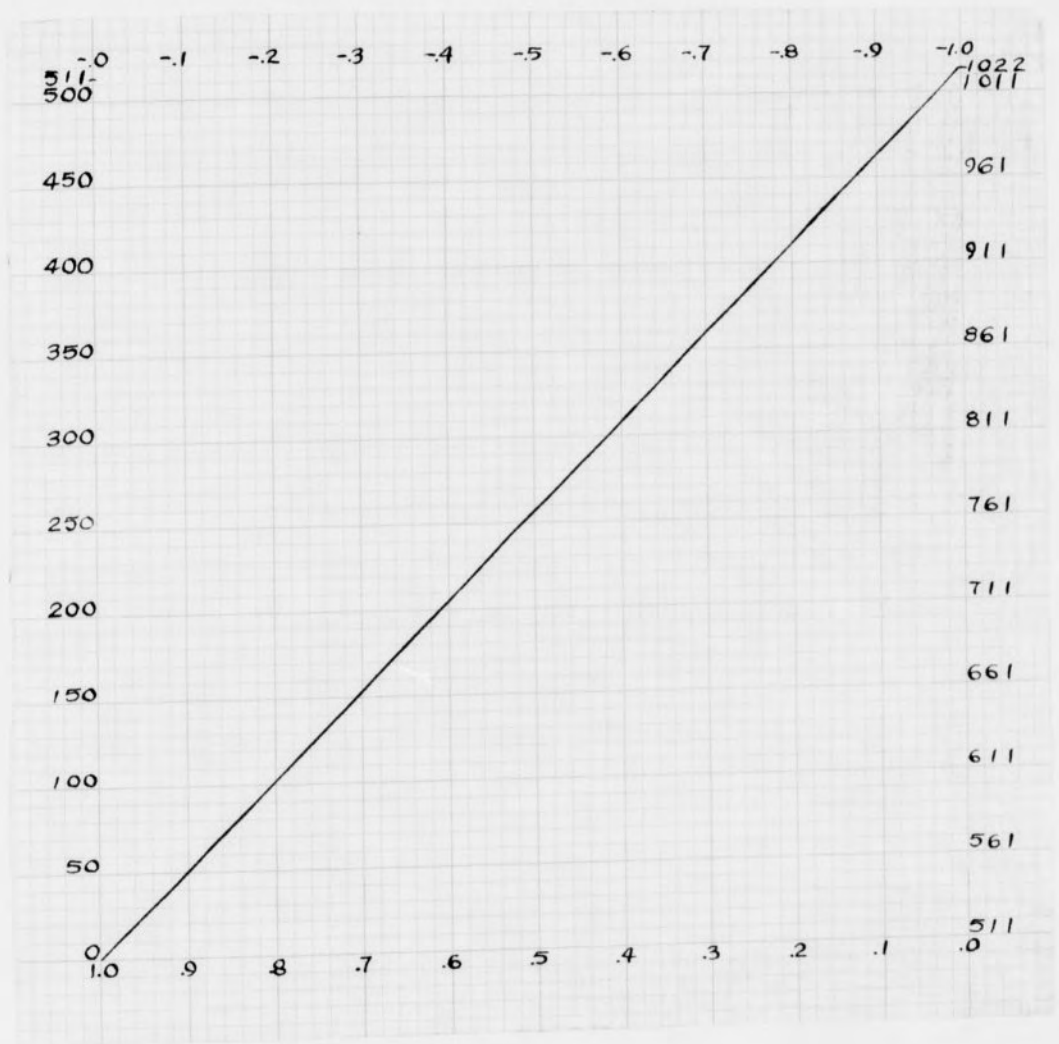


FIGURE III
 NOMOGRAPH

This Thesis was Typed
by
Mrs. Mary Jane V. Knight