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THE EFFECT OF AGING ON RATINGS OF SELF, PHYSICAL SELF AND RELATED BODY CONCEPTS AS MEASURED BY A SEMANTIC DIFFERENTIAL

by Gary V. Whalen

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THE EFFECT OF AGING ON RATINGS OF SELF, PHYSICAL SELF AND RELATED BODY CONCEPTS AS MEASURED BY A SEMANTIC DIFFERENTIAL

by Gary V. Whalen

A thesis submitted in partial fulfillment
of the requirements for the degree of Master of Arts
in Psychology in the Graduate School of the
University of Richmond
June, 1966

To my Mother and Father

ACKNOWLEDGMENTS

The author is deeply indebted to Dr. Austin E. Grigg for his advice, suggestions and patience throughout the preparation of this study. The author also thanks Dr. William H. Leftwich and Dr. W. Warner Burke for their helpful criticisms and ideas.

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Chapter I

INTRODUCTION

As an individual grows older, his body undergoes various physical changes. The influence physical change has on the self concept is not clear. It has been generally assumed in the literature that these body alterations which accompany the advanced stages of aging are of a negative nature (Birren, 1959; Blumenkiantz, 1964; Fisher, 1959; Fisher and Birren, 1947; Lehner and Gunderson, 1953; Mason, 1954; Schwartz, 1963). Aging is generally represented by bodily decline, loss of attractiveness, deflation of self confidence and self satisfaction, increasing experience of functional loss and a greater vulnerability to disease and physical damage.

Several approaches have been developed in studying the relationship of the body to psychological variables. Sheldon (1942), and also Kretschmer (1953), have sought to equate physiological dimensions with personality types. Malmo (1949) has defined body in terms of physiological functions. Body concepts have also been used in terms of the effects serious

handicaps or deformities may have on the personality. Alexander and Wolf (1948) have done research on the possible connection between physiological illness and personality style. However, investigations dealing in the manner in which individuals perceive their own bodies have been scant.

> Perhaps the least known and least explored concept of body is that which has been formulated in terms of the body image. Body image is a term which refers to the body as a psychological experience, and focuses on the individual's feelings and attitudes toward his body. Fisher and Cleveland (1958, page X).

Wright (1960) views a person's identity or self as a dynamic entity composed of several factors, one of which is the body image. Body image is defined by Fisher and Cleveland (1958) as literally the image a person has of his own body, which has evolved through experience. The term connotes an anchorage in phenomena relating to attitudes toward one's own physical body. They further state that:

> Body image may in certain respects overlap the various usages of concepts like ego, self, and self concept. (page XI).

The relation of body image, or perception of the physiological self, to ego functioning as a whole can be seen in certain types of personality disorders. For example, neurotic and schizophrenic patients sometimes have quite bizzare body images: "I feel as though my insides are rotting away." These images frequently involve body deterioration

and disintegration of the body parts, according to Fisher and Cleveland (1958). Hostility toward the self may be reflected in sensations of disintegration and decline.

If the body image is more or less linked to an individual's conception of his self, it would seem reasonable to expect a shift toward a more negative perception of physical worth as a function of growing older. It may be possible, as Wright (1960) implies, that inferences about the body image (and indirectly the self concept) may be drawn from the manner in which an individual perceives his body. In other words, an individual's feeling that parts of his body are valuable or worthless, strong or weak, fast or slow may tell us a good deal about the nature of the body image, and one aspect of the self concept, as a function of growing old.

Aging and Strength. Seymour Fisher (1959) points out that it is likely, for example, that aging results in changes in self perception of personal strength and attractiveness.

Bruce Fisher and Birren (1947) indicate the development of muscular strength follows a systematic trend with an increase in strength up to the late twenties and a decline, usually at an increasing rate, from that time on. They feel these findings are in general agreement with those reported for intellectual abilities and motor skills.

More specifically, Birren (1959) states that the relationship of strength to age, as found in various studies, indicates curves which show a differential decline with age in different muscle groups. This seems to indicate that the type of functional loss experienced by an individual will be determined, in part, by the age level he has reached.

Schwartz (1963), as well as Kleemeier (1965), view aging not as simply the passage of time, but as a process that involves increasing experiences of functional loss.

Blumenkiantz, et al. (1964), in a paper evaluating the effect of chronic physical illness on personality variables, indicate that aging is generally assumed to involve physical, intellectual and emotional disabilities which lead to changes in attitudes, interests and personality.

Aging and Self Evaluation. Mason (1954a), using a battery of self concept measuring tests, found that 60 aged institutionalized subjects viewed their self worth in a more negative fashion than did a group of aged subjects who were able to maintain an independent existence. This group, in turn, viewed its self worth in a more negative fashion than a group of young adults. The tests did not include physical self ratings, but it seems likely that this aspect of the self concept would display a similar variation.

In another experiment, Mason (1954b) found no significant differences between two aged experimental groups regarding self evaluative judgments.

> ...they felt they were unable to do things as well as most people, they felt they did not enjoy living as much as they used to, they did not feel they had enough energy to do things they would like to do, they did not feel their days were filled with useful activities, and they were inclined to worry more about physical pain and suffering than a control group of young adults. (page 337).

Since the two aged groups were of widely different living conditions and economic status, Mason feels that negative self judgment is a variable significantly related to growing old.

Gorman and Lawrence (1964) indicate that a shift in the perceived importance of various body parts may occur with changes in chronological age. His sample of 110 student nurses reported old people were most concerned with the heart, adults viewed sex organs as most important and that children were especially interested in the brain, heart and digestive organs. It would appear that these body part preferences are in need of more extensive verification, but the shift in body part emphasis with increased age does seem highly tenable.

Among other factors, Lehner and Gunderson (1953) studied the relationship of age to the height of the figure drawn on the Draw A Person Test, by a group of normal subjects.

The results indicate that there is a variation in the height of the figure drawn corresponding with the age of the subject. Males display a decrease in figure height around the age of thirty. The authors submit the hypothesis that the size of the figure drawn reflects the drawer's self concept i.e., it is an index of the person's self evaluation. If one grants the authors' view, these results imply a devaluation of self concept as an apparent function of growing older.

The effects of bodily changes brought on by aging on self attitudes and personality are by no means clear. Kenneth Bloom (1961), in a study on age and self concept, did not find evidence to accept the hypothesis that the correlates of the aging process result in differences in self acceptance and self rejection. Being unable to support the notion that self acceptance decreases and self rejection increases as individuals grow older, he states that the self perception of an individual does not change drastically with age.

Lorge, Tuckman and Dunn (1958) suggest human figure drawings made by adults reflect physiological and psychological deficits which may occur with age viz., an increased loss of intactness. However, Tuckman, Lorge and Zeman (1961) were not able to support the notion that figure intactness fluctuates with age. Their replication of the previous study indicated

the original finding may have been due to biased sampling and variation in the test situation.

The exact relationship that the body image has on the self concept is still undetermined. Grigg and Moore (1959) found no significant difference between a handicapped group of male college students and a non-handicapped group. They conclude a person's self image may be independent of his actual physical status. It may be that at this age and educational level the self concept is less influenced by body image and more a function of other variables.

Centers and Centers (1963) investigated the responses of amputee children on a Draw A Person Test and concluded, these children, in the main represented their bodies, and those of others realistically and nondefensively.

Desroches, Kaiman and Ballard (1964) were not able to discriminate between old domiciliary subjects (mean age of 62.57) and less old domiciliary subjects (mean age of 51.95) using the Cornell Medical Index. They state that a high number of somatic and psychiatric complaints were positively related to poor mental health, but were not related to age or current physical health.

Birren (1959) states that changes in the body form with increased age have important influences on behavior. However,

he cautions that many of the differences between young and elderly patients are not due to aging but to differences arising from shifts in nutrition, nature of the physical environment, education, public health and attitudes.

Aging and Health Status. Kleemeier's (1962) study on the interaction of aging and illness suggests that the psychological effects of aging are, insofar as they refer to the self concept, substantially attributable to health factors, and that age itself is considerably less important.

This point of view receives further confirmation from Canter, et al. (1962), who report that depression vulnerability was found to be associated with indices of a positive medical illness history and physical symptomatology regardless of age and may be a confounding factor since a higher proportion of older adults have positive medical histories than is true of younger adults. In fact, it is difficult to get male subjects, aged 65 or older, who are free of pathology.

> Even persons with healthy constitutions experience major age changes that they share with the less healthy. They appear at different age levels in the individual and in separate organ systems; and they do not seem to result from specific diseases. Although there are progressive degenerative changes, the senescent person is seldom "old" throughout, and individual variation in a lack of uniformity in physiological aging is much greater in older persons than in younger ones. Birren (1959, page 303-304).

Kleemeier (1965) also points out that you can get older subjects who are healthy and alert but seldom free from disease.

Aging and Freudian Theory. Freud (1953) made only a few remarks on the nature of psychological changes during old age. Most of these he related to his conception of the death instinct.

He viewed old age as involving a weakening of the ego (self concept) accompanied by regression tendencies taking the form of a growing preoccupation with bodily sensations and hypochondriacal disturbances.

There does appear to be general experimental confirmation of Freud's hypothesis regarding the correlation of old age and concern over the body. Calden and Hokanson (1959) found a significant increase in Hs, D and Si scales on MMPI scores of 160 subjects (age range from 20 to 69 years), reflecting increased hypochondriacal, depressive and introversive tendencies with advancing age. They state that these changes suggest that people become more preoccupied with themselves both physically and mentally as they become older. These self-centered preoccupations seem to correspond to the decline in physical powers and health, the loss in personal competence and mental capacity reported in studies of aging.

Blumenkiantz, et al. (1964) report that MMPI profiles of aged males show elevated D scale scores, whether or not they are physically healthy.

Additional partial confirmation for Freud's thesis comes from Opitz (1962) who reports that psychotherapy with neurotics of advanced age most often deals with problems centered around an apprehension of death.

Views on the Nature of the Body Image. Wright (1960) describes the possible effect body image may have on self conception:

> Physical limitations per se may produce suffering and frustration, but the limitations imposed by the evaluative attitudes toward physique cut far deeper and spread far wider; they effect the person's feelings about himself as a whole. (page 14).

Wright's point of view seems to correspond with that of Adler (1930), who indicates that when an individual perceives an aspect of his body as inferior, he generalizes this inferiority to his total conception of himself.

Experimentally, Jourard and Rimy (1957) found that male college students accept or reject their bodies in toto, i.e., in an undifferentiated, global fashion. However, when self image and not body image was studied, this total rejection was not obtained in self evaluations. It should be noted that a more extensive self depreciation would be indicative of a maladjusted personality, according to Rosenberg's (1962) findings using the California Psychological Inventory.

Kaun, et al. (1960), report that a more accurate prediction of a person's mental health can be made by basing

the prediction on the patient's physical body status than on the type of institution in which he resides, viz., home for the aged, nursing home or state hospital.

Aging and Rogerian Theory. Rogers (1947) defines psychological adjustment as present:

> ...when all the ways in which an individual perceives himself-all perceptions of himself in relation to others-are accepted into the organized conscious concept of the self, then this achievement is accompanied by feelings of comfort and freedom from tensions which are experienced as psychological adjustment. (page 364).

It would appear that the ability to achieve Rogers' definition of an "organized concept of self" may be especially hampered by the correlates of advanced age such as forced retirement, loss of a partner or friends, decrease in health, etc. Psychological readjustment seems to be involved with advanced age. This is again indicative of potential self evaluative shifts occurring in older individuals.

Havighurst (1961) puts forth the notion that successful aging involves the maintenance of the activities and attitudes of middle age.

There exists no conclusive data on how successful individuals, or groups of individuals, are in maintaining psychological adjustment or engaging in readjustment as they grow older. In fact, little is known about how self related percepts are altered through the course of the aging process.

The Present Study. Although there is considerable overlap between the body image and the self concept, it would be premature to draw any conclusions regarding one based upon the other until the nature and extent of correlation is obtained. This study is an attempt to determine the extent and direction that an individual's body image may fluctuate as a function of growing old. It is concerned with how the human organism may change over time with respect to a single aspect of the constellations of factors that go into making up a person's self concept. More specifically, do body part ratings along a semantic differential get at the nature and extent of possible age changes in values and attitudes concerning the body image?

If changes in body ratings between samples of different age groups are related to the aging process, it seems reasonable to assume that these changes will be generally in a negative (self depreciatory) direction after maturity, gradual rather than abrupt and tend to be irreversable.

The following predictions are submitted:

1. Once early adulthood has been passed, there will be a more negative view of body parts in general. There will be a tendency for more pessimistic evaluations of the physical self.

2. Some categories of body concepts (e.g., external, internal or functions) will show earlier or later devaluation than others.

3. Some categories of body concepts will show a significant correlation with the physical self and the self ratings.

4. In the semantic differential technique there will be evaluative, potency and activity scales which may differ in assigned value for each category of concepts.

Chapter II

PROCEDURES

Semantic Differential Technique. Osgood, Suci and Tannenbaum (1957) indicate that the "meaning" of a concept may be differentiated from other concepts by assigned values (usually from 1 to 7) along a series of polar term scales. Based on factor analytic research, the authors state that roughly three dimensions may be used to "define" or pinpoint a concept in semantic space, viz. the Evaluative (e.g., "good-bad"), Potency (e.g., "strong-weak") and Activity (e.g., "fast-slow") factors. Although there exist a large number of additional dimensions, they only account for a relatively small amount of the total variance.

> By semantic differentiation, then, we mean the successive allocation of a concept to a point in the multidimensional semantic space by selection from among a set of given scaled alternatives. Difference in the meaning between two concepts is then merely

> a function of the differences in their respective allocations within the same space... Osgood, Suci and Tannenbaum (1957, page 26).

In order to obtain a quantitative indication of body part and related meanings, 4 sets of polar terms, that tend to load heavily ("pure") on each factor, were selected. The factors and their respective polar terms are indicated on Table 1.

Twenty concepts consisting of 12 body parts, 6 body part functions, a self concept ("me") and a physical self concept ("my body") were rated on the semantic differential. The body concepts were designated into internal and external categories (see Table 2).

The self concept ("me") was presented first, followed by the physical self concept ("my body"). Body concepts (12) were then rated followed by the body part functions (6).

General Information Sheet. After completion of the semantic differential, all subjects were asked to fill out a general information sheet. This provided information regarding age, sex, height, weight, occupation, educational level and type, marital status and health status.

TABLE 1.

Semantic Factors and Their Sets of Polar Terms

Factor	Polar Terms
Evaluative	"good-bad" "healthy-sick" "valuable-worthless" "beautiful-ugly"
Potency	"strong-weak" "thick-thin" "rugged-delicate" "hard-soft"
Activity	"fast-slow" "active-passive" "sharp-dull" "sensitive-insensitive"

TABLE 2.

Body Parts (internal and external), Body Part Functions, Self and Physical Self Concepts Included on the Semantic Differential

Internal	External	Body Part Functions	Self
Heart	Skin	Chewing	Myself
Brain	Legs	Thinking	
Lungs	Teeth	Moving	Physical Self
Stomach	Hair	Digesting	
Muscles	Ears	Seeing	
Bones	Eyes	Breathing	My Body

Since these were all potentially confounding variables, it was necessary that they be known and placed under control via selective sampling.

It was particularly important to control health status. A "healthy" subject was operationally defined as indicating "No" to the question: "Have you seen a doctor four or more times in the past year for any healthy problem or do you have any recurrent illness?"

Subjects. Four age groups of healthy subjects, consisting of 15 males each, were selected from data on the General Information Sheet. The experimental groups were as follows:

1. Adolescent Group (16 years old)
2. Young Adults (19-21 years; Mean = 20.3)
3. Middle Aged Adults (30-46 years; Mean = 37.5)
4. Advanced Aged Adults (61-82 years; Mean = 71.8)

The Adolescent (high school students) and Young Adults (college students) were administered the semantic differential in a group setting. The Middle Aged and Advanced Aged groups were given the differential in various group and individual settings.

The numerical ratings for each category of concepts were averaged for each experimental group. The averaged ratings were then evaluated, for between and within group differences, by 5 analyses of variance (ANOV). The first

ANOV was in terms of self concept ratings. Subsequent ANOVs were performed regarding physical self, internal, external and functions of body parts.

The correlates of self and physical self ratings with internal, external and functions of body parts were also determined by a series of Pearson r correlations.

The Evaluative, Potency and Activity factors were also examined in relation to possible within group variations.

The .05 confidence level was used as the criterion of significance for all statistical tests.

Chapter III

RESULTS

The results of this study lend support to prediction (1) of a more negative view of self concept as well as functions of body parts with increased age. Prediction (2), regarding the sequence in which the various concept categories exhibit decline, was also supported in the two instances in which significant differences between age groups were obtained. Prediction (3), viz., the correlation of certain body part concept categories with the ratings assigned physical and self concepts, was found to be confirmed as was prediction (4). Prediction (4) stated that the evaluative, potency and activity scales would differ from each other in assigned value for each category of concepts rated.

Analyses of Variance. The semantic ratings assigned to the self and physical self concepts, and also the internal, external and body part functions, displayed a numerical shift toward less positive evaluations with increased age. The youngest experimental group rated itself consistently more

favorably on all semantic factors for all concept categories than did the oldest experimental group.

This trend achieved significance with regard to the body part functions (Table 8; Figure 5) and the self concept (Table 4; Figure 1).

Body Part Functions. A comparison of means (Newman-Keuls) revealed that the adolescents and the middle age adults did not differ significantly from each other. These two groups rated their body part functions more positively than the young adult group which in turn gave higher ratings than the elderly group. Since a significant interaction was also obtained, it is not possible to attribute these results solely to the age factor.

An analysis of simple main effects revealed significant differences between age groups along the evaluative and activity scales of the semantic factor (Table 8).

A comparison of means (Newman-Keuls) along the evaluative scales revealed that the elderly subjects rated themselves significantly lower than the other groups. The same result was obtained along the activity scales.

The groups did not differ along the potency scales.

Self Concept. Comparing the mean score for each age group regarding self evaluation resulted in a significant difference between the elderly group and the more positive

ratings of the three younger groups. It should be noted that the three younger groups did not differ significantly from each other regarding their self concepts.

Prediction (1) specifically indicated that the physical self rating would probably be the most apt to change along the age continuum. The data indicate, however, that this was not the case.

Prediction (2) stated that some categories of concepts (e.g., self, physical self, external parts, internal parts or body part functions) would show earlier or later devaluation than others. This expected differential decline of various body part and self concept categories was obtained. In terms of body part functions, a significant decline was obtained between the elderly group and all other groups. A second significant difference was obtained between the lower ratings given by young adults and those indicated by the adolescent and middle aged subjects.

With regard to the self concept category, the combination of age groups differing significantly from each other was not the same as that obtained for the body part function category. In this case the adolescents, young adults and middle aged males did not differ in their assigned ratings.

The fact that devaluation does not follow an entirely lawful decline with age lends support to prediction (2).

The Semantic Factor. Prediction (4) stated that the levels of the semantic factor might differ in assigned numerical value for each category of concepts rated. These three levels of the semantic factor, viz., the evaluative, potency and activity scales did differ significantly ($p < .01$) for all 5 ANOVs.

A comparison of means (Newman-Keuls) indicated that the evaluative scales were always rated significantly higher than the potency scales. In all but one instance (i.e., the self concept), the evaluative level was also significantly higher than the activity level (see Figures 1-5).

Linear Correlations. For each of the four age groups, a series of Pearson r's were computed in order to study the correlation between each semantic level of the self and physical self ratings, with all combinations of semantic level ratings given the internal, external and body part function categories. The significant correlation coefficients obtained from this analysis are presented in the Appendix (page 45-48). Other significant correlations between various category levels are also presented.

Prediction (3) indicated that certain classifications of concepts (e.g., internal, external or body part functions) would correlate with ratings assigned the physical self and

the self evaluations. This prediction was confirmed by 82 out of 168 significant correlations.

Additional information yielded by the correlational analysis includes the finding that within the young adult group and the elderly group all the semantic factor levels (i.e., the entire semantic differential profile) for a given category of concepts correlated with the semantic differential profile of another category of concepts. These findings are presented on Table 10.

TABLE 3.

Mean Semantic Profiles

for Each Age Group

		Adolescents	Young Adults	Mid. Aged Adults	Old Adults
Self	Evaluative	5.43	5.35	5.47	4.85
	Potency	5.07	4.50	4.95	4.38
	Activity	5.00	5.55	5.35	4.78
Physical Self	Evaluative	6.17	5.78	6.00	5.57
	Potency	5.08	5.12	5.17	4.82
	Activity	5.73	5.42	5.38	5.05
Functions	Evaluative	5.97	5.74	5.89	5.42
	Potency	4.53	4.53	4.54	4.52
	Activity	5.47	5.06	5.31	4.69
Internal	Evaluative	5.91	5.69	5.66	5.40
	Potency	4.91	4.81	4.86	4.77
	Activity	5.23	5.11	4.92	4.89
External	Evaluative	6.11	5.91	5.76	5.42
	Potency	4.56	4.41	4.54	4.46
	Activity	5.26	4.90	4.97	4.67

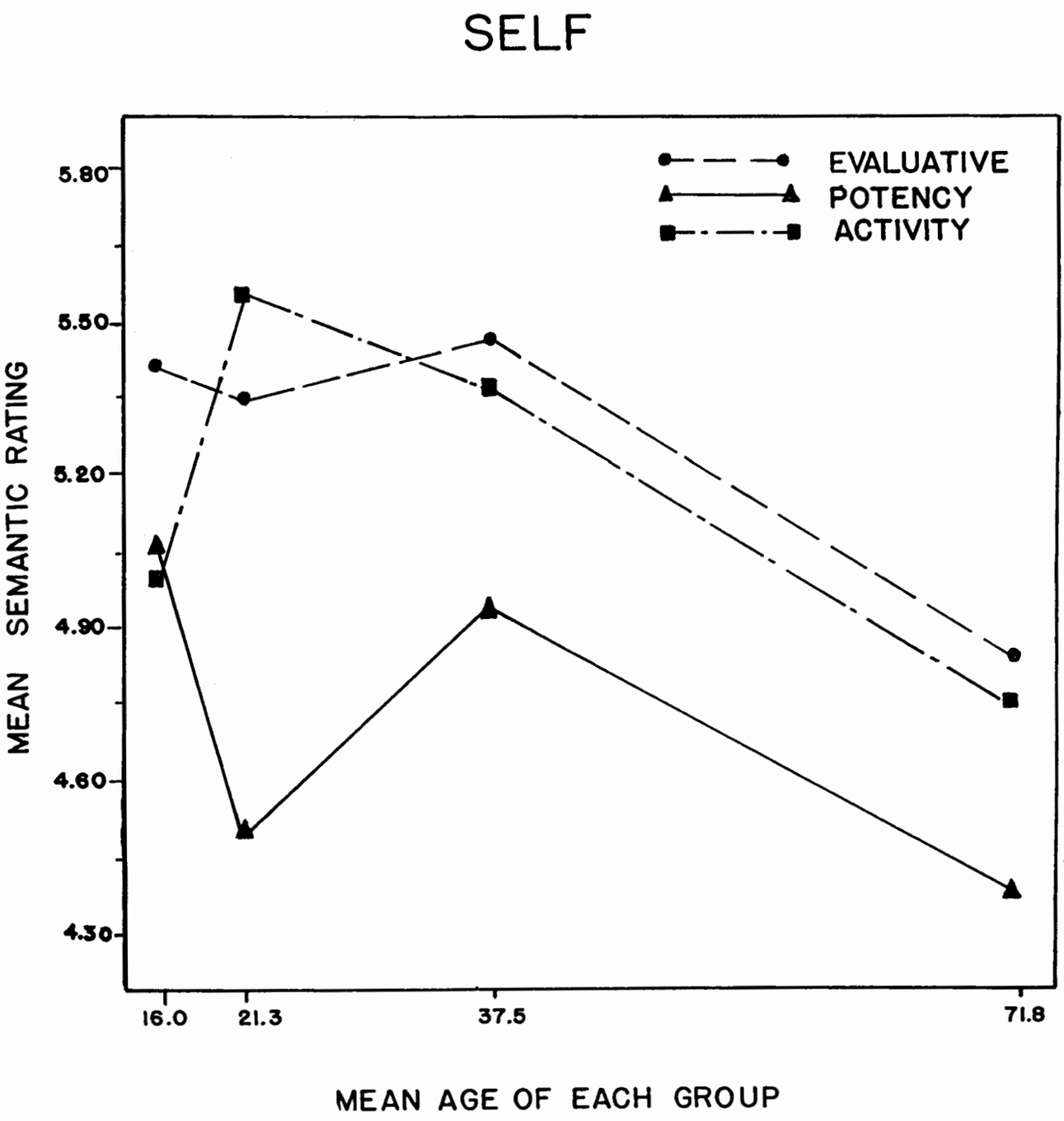

Figure 1. Mean semantic ratings assigned the evaluative, potency and activity factors of the self concept by each age group.

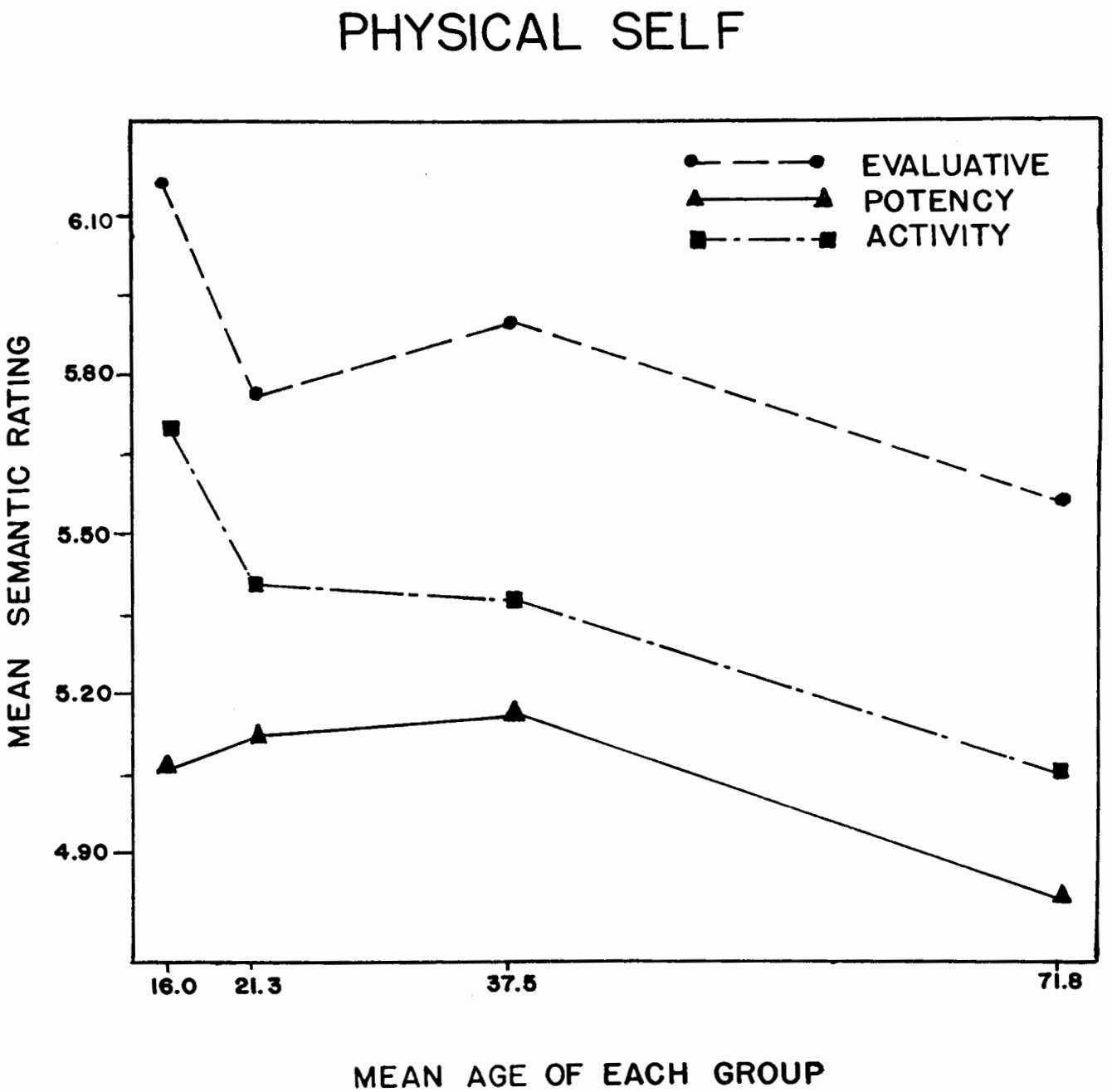

Figure 2. Mean semantic ratings assigned the evaluative, potency and activity factors of the physical self concept by each age group.

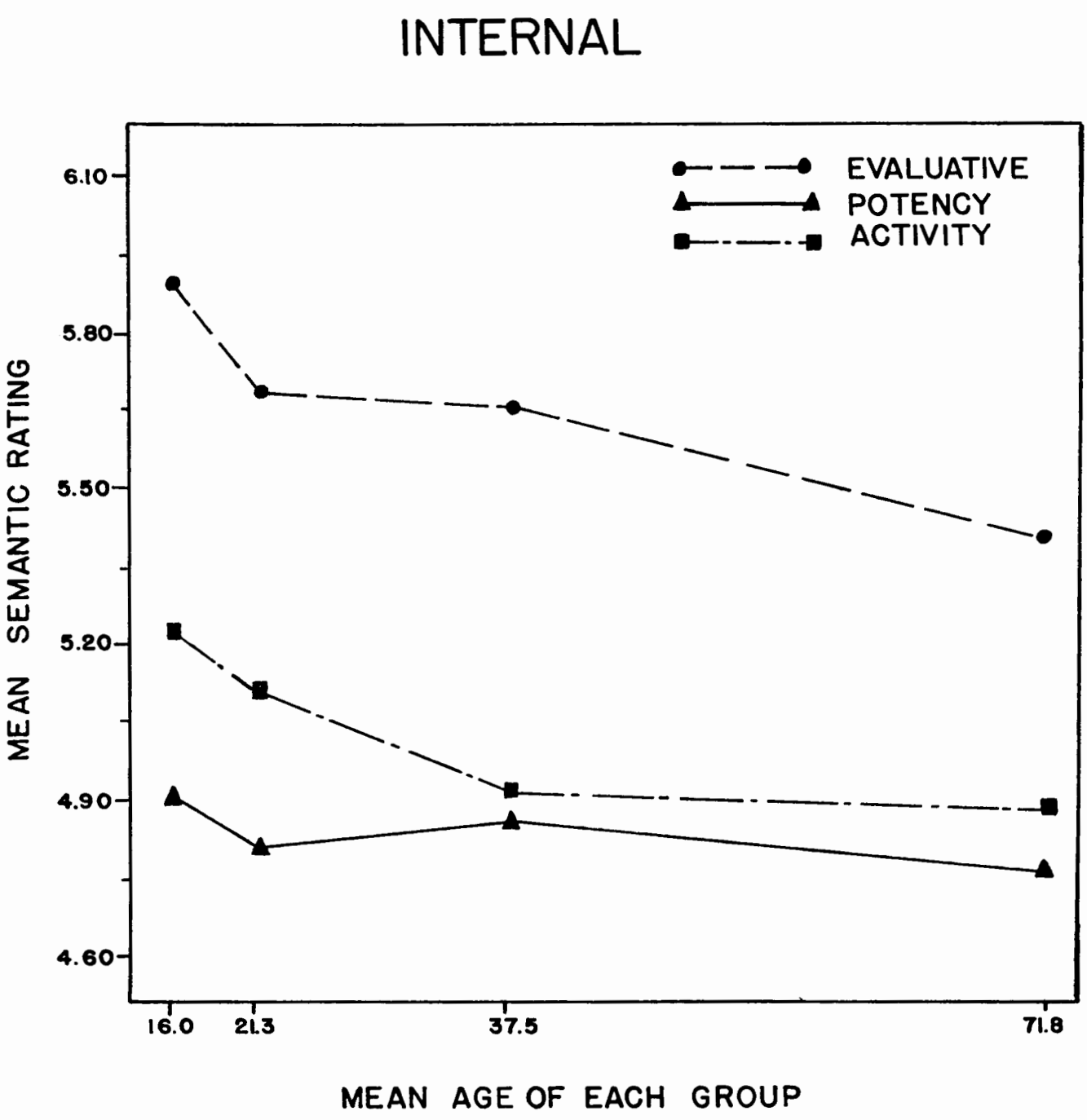

Figure 3. Mean semantic ratings assigned the evaluative, potency and activity factors of the internal body parts category by each age group.

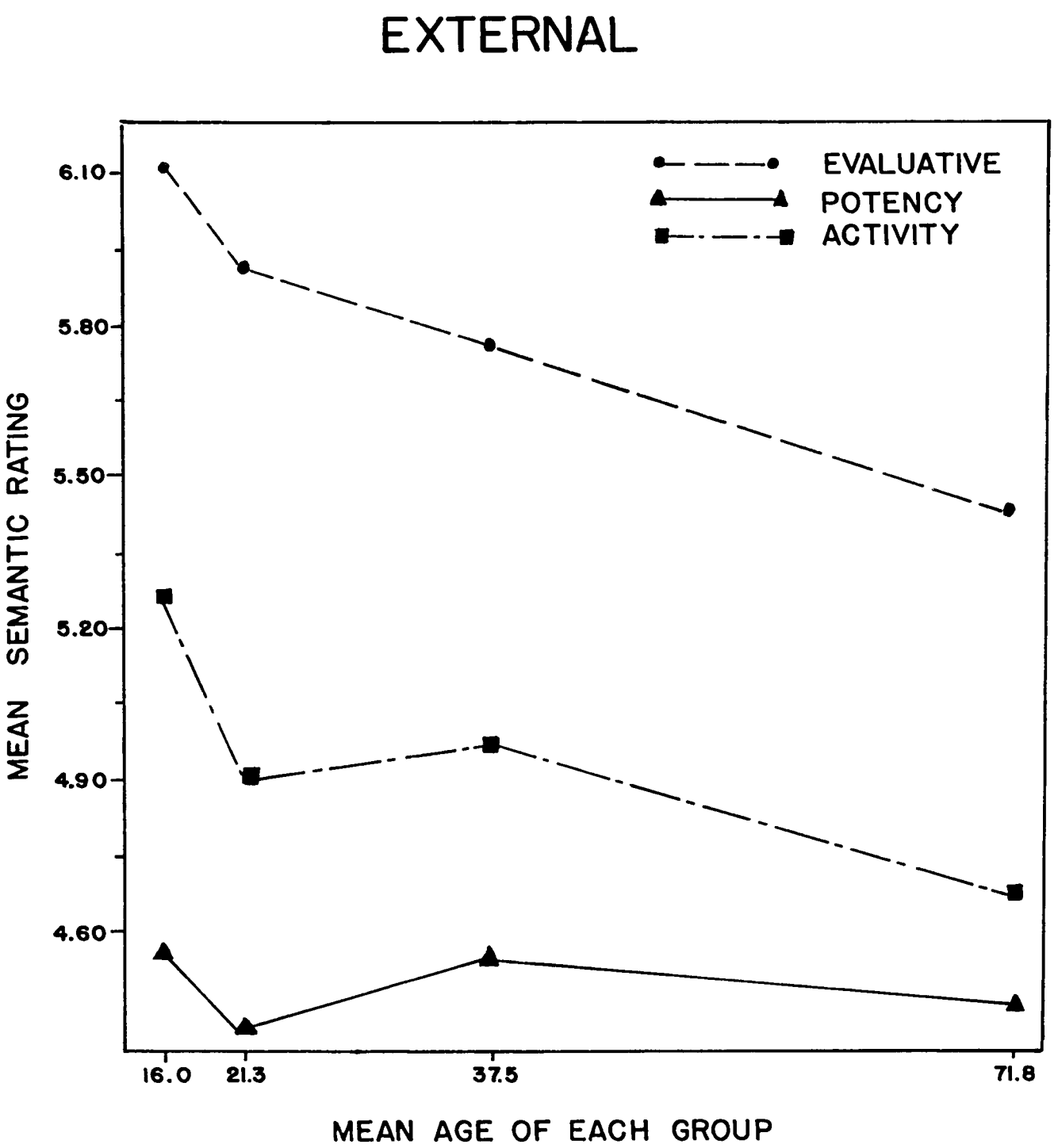

Figure 4. Mean semantic ratings assigned the evaluative, potency and activity factors of the external body part category by each age group.

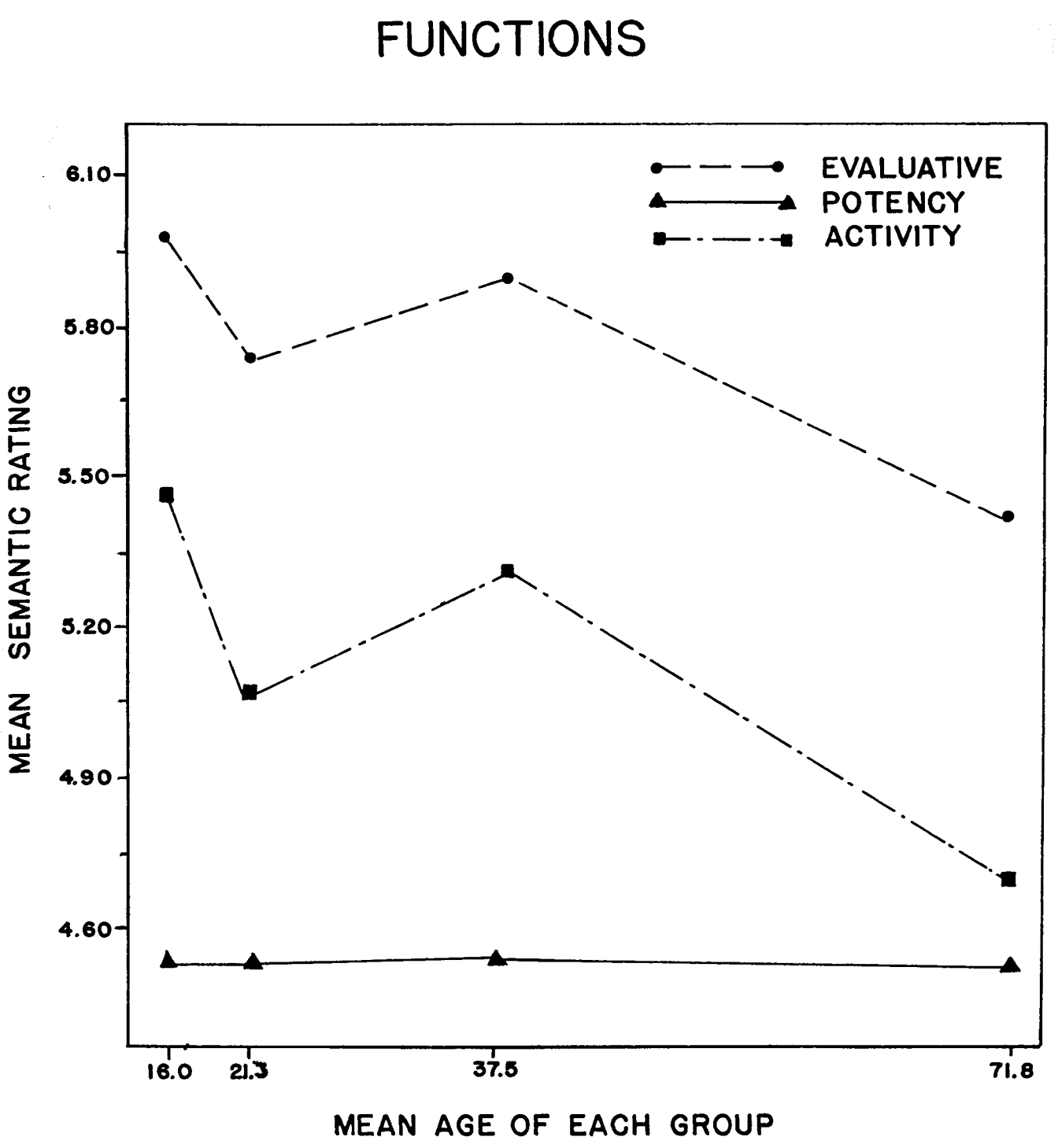

Figure 5. Mean semantic ratings assigned the evaluative, potency and activity factors of the body part functions category by each age group.

TABLE 4.

Analysis of Variance for Self Ratings

Source of Variation	df	MS	F
Between Subjects	59		
A (Age)	3	49.28	3.05*
Subjects within groups	56	16.17	
Within Subjects	120		
B (Semantic Factors)	2	81.94	7.59**
AB	6	12.88	1.19
B x subjects within groups	112	10.79	

* $p < .05$

** $p < .01$

TABLE 5.

Analysis of Variance for Physical Self Ratings

Source of Variation	df	MS	F
Between Subjects	59		
A (Age)	3	34.11	1.51
Subjects within groups	56	22.57	
Within Subjects	120		
B (Semantic Factors)	2	168.09	27.28**
AB	6	3.41	.55
B x subjects within groups	112	6.16	

** $p < .01$

TABLE 6.

Analysis of Variance for Ratings

of Internal Body Parts

Source of Variation	df	MS	F
Between Subjects	59		
A (Age)	3	13.41	1.02
Subjects within groups	56	13.13	
Within Subjects	120		
B (Semantic Factors)	2	179.35	33.62**
AB	6	1.98	.37
B x subjects within groups	112	5.33	

** $p < .01$

TABLE 7.

Analysis of Variance for Ratings

of External Body Parts

Source of Variation	df	MS	F
Between Subjects	59		
A (Age)	3	26.19	2.28
Subjects within groups	56	11.51	
Within Subjects	120		
B (Semantic Factors)	2	420.13	124.85**
AB	6	5.25	1.57
B x subjects within groups	112	3.37	

** $p < .01$

TABLE 8.

Analysis of Variance for Ratings

of Body Part Functions

Source of Variation	df	MS	F
Between Subjects	59		
A (Age)	3	27.63	3.82*
Subjects within groups	56	7.23	
Within Subjects	120		
B (Semantic Factors)	2	360.06	149.16**
AB	6	6.91	2.86*
B x subjects within groups	112	2.41	

* $p < .05$

** $p < .01$

TABLE 9.

Simple Main Effects of Body Part Functions of Factor A (Age) for Each Level of Factor B (Semantic Levels)

Source of Variation	df	MS	F
a at b_1 (Evaluative)	3	13.83	3.44*
a at b_2 (Potency)	3	.03	.0075
a at b_3 (Activity)	3	27.60	6.87**
Within Cell	168	4.02	

* $p < .05$

** $p < .01$

TABLE 10.

Concept Categories with Significantly

Correlated Semantic Differential Profiles

Group 2

Functions Evaluative	Functions Potency	Functions Activity
External Eval.*	External Pot.*	External Act.*

Group 4

Physical Self Evaluative	Physical Self Potency	Physical Self Activity
Internal Eval.**	Internal Pot.**	Internal Act.**
Functions Eval.**	Functions Pot.**	Functions Act.**
External Eval.**	External Pot.**	External Act.**
Internal Evaluative	**Internal Potency**	**Internal Activity**
Functions Eval.**	Functions Pot.**	Functions Act.**
External Eval.*	External Pot.**	External Act.**
Functions Evaluative	**Functions Potency**	**Functions Activity**
External Eval.*	External Pot.**	External Act.*

* $p < .05$

** $p < .01$

Chapter IV

DISCUSSION

As noted in Chapter I, the relationship of the body image to the self image is not clear. The literature implies that aging may result in an altered body image and this may subsequently alter certain aspects of the self concept. This study attempted to determine the extent to which the body image correlates with the self concept, and to examine whether certain categories of an individual's physical body correlate with the body image and self concept. In other words, the question asked was: "For a given age, how much of a person's self concept is linked to his body image, and what are the percepts that go into forming his body image?" Particular emphasis was placed on how these relationships may be altered by aging.

Age differences were found to be significant with regard to perception of the self concept and perception of physical body functions. In each case, old subjects viewed themselves less positively than the other three groups.

In terms of the present findings, the initial hypothesis of this paper may be more appropriately worded as: A general devaluation of the self concept and a less positive perception of functional ability is exhibited after middle age has been reached. In both cases this depression was most significant for the elderly group. However, with regard to functional ability, devaluation, to a lesser degree, was also indicated by the young adult group.

These results offer confirmation to Schwartz (1963) and Kleemeier (1965) who emphasize the view that aging is primarily a process involving increasing experiences of functional loss.

Depreciation of self concept with increased age also corresponds to Mason's (1954a) findings. Even though different self evaluation instruments were employed, she also found that old subjects viewed themselves more negatively than young subjects.

No significant differences between age groups were found in the perceptions of the physical self, internal body part and external body part concepts.[1] Since aging, for the relatively healthy individual, does not entail widespread physical deterioration of the entire body, it was expected that ratings assigned some of the categories of biological

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[1] The correlates of these categories did vary.

concepts would not differ significantly between young and old subjects. It was surprising, however, that the gross physical self concept turned out to be one of these constant factors. This result indicates that the physical self is not tightly linked to the self concept. Specifically, the deflation of self ratings exhibited by older subjects is more directly related to variables other than the body image. The body image of relatively healthy, older males is apparently less susceptible to change than the self image.

In the present study, the elderly sample was composed of individuals in good health. But many older males in the population are obviously not as free of physical infirmities. Thus, the present findings may not apply to older males in general. Aging and illness may interact to such an extent that the two terms may be synonymous.

Support of prediction (3), viz., some categories of body concepts will show a significant correlation with the physical self and self ratings, makes more clear what variables go into forming the body image and self image for a given age level.

The correlation analysis indicated that the self concept ratings displayed 24, out of a possible 168, significant correlations with the other variables. The self concept was most often correlated with the physical self (body image).

Physical self ratings correlated significantly with 58 other variables. The number of these correlations, as well as the categories, varied with age. In contrast to adolescents and middle aged subjects, young adults' and elderly adults' body images were closely correlated with internal and external body concepts and the functions of these body concepts.

Gorman and Lawrence (1964) indicated that aging may result in a shift in the perceived importance of body parts. The present findings, although not giving a direct measure of the perceived importance assigned to specific body parts, do illustrate a definite shift in correlational alignment with age. Perhaps the most significant re-alignments are presented on Table 10. It was found that the entire semantic profile of a concept category correlated with that of another concept category.

The semantic ratings that adolescents assigned to body part functions matched those assigned to the external concept category.

The elderly subjects assigned body image profiles which significantly correlated ($p < .01$) with those assigned the internal, external and body part function categories. The evaluations assigned to the body image by this group were not unlike those given every other measure of the physical body.

These results are not consistent. The body image is not particularly related to the self or aspects of the physical self for the adolescents and middle aged groups. On the other hand, young adults, and to a far greater extent the elderly adults, directly relate the body image to specific aspects of their physical make-up. The greater biological definition of body image given by the elderly group is indicated on Table 10.

Prediction (4) stated that the levels of the semantic factor would differ from each other in assigned value for a given concept category. As reported in the previous section, these differences did occur. The evaluative scales were rated consistently higher than the potency scales for all five concept categories.

Subjects of all age groups were more favorably impressed with the "goodness", "healthiness", "worth" and "beauty" of their self concepts, their physical selves, internal and external body parts than with their ruggedness or potency, or their swiftness or activity.

Wright (1960) indicates that the evaluative attitude toward self and physique could have a drastic effect on the individual's entire appraisal of himself. In this study, the evaluative nature of self appraisal is less susceptible to age changes than the potency or activity dimensions.

In the body function category, where significant interaction was obtained, it was found that the elderly group assigned significantly lower ratings to the evaluative and potency scales than the other groups. Although it seems possible that the elders' depression of the evaluative scales regarding the functions of their bodies may have generalized to this same group's significantly lower self concept ratings, it would seem more likely that such a generalization would most directly effect the elders' body image (physical self) rating. Additional evidence for this alternate view is derived from the fact that the body function category profiles correlated so highly ($p < .01$) with the physical self category profiles. As noted earlier, the physical self ratings did not differ significantly between the 4 age groups.

Stated another way, elderly subjects did not generalize their perceived inferiority of one aspect of their physical make-up to their entire physical selves. This result is contrary to that of Adler (1930) who indicates that a global generalized inferiority would occur.

Chapter V

SUMMARY

A review of the literature dealing with the effect aging may have on an individual's perception of himself and more specifically the perception of his physical self, did not define clearly the nature of the self - vs - the physical self relation, nor did it indicate the factors that go into making up these two concepts.

This study attempted to determine the extent to which the body image correlated with the self concept and, in addition, to examine how well certain categories of an individual's physical make-up correlated with the physical self and self concepts. Particular emphasis was placed on how aging would effect these relationships.

A semantic differential composed of 12 scales, designed to measure the evaluative, potency and activity dimensions assigned to the self, physical self and body concept categories, was administered to four groups. The mean age for each group was: 16, 20.3, 37.5 and 71.8. Each age level consisted of 15 males, all in good health.