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## Size-distance perception of human images as a function of self-ideal discrepancy and defensive mode.

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SIZE - DISTANCE PERCEPTION OF  
HUMAN IMAGES AS A FUNCTION OF  
SELF - IDEAL DISCREPANCY AND  
DEFENSIVE MODE

WILLIAM K. SHRADER  
1963

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SIZE-DISTANCE PERCEPTION OF HUMAN IMAGES  
AS A FUNCTION OF  
SELF-IDEAL DISCREPANCY AND DEFENSIVE MODE

by

William K. Shrader

Thesis Submitted in Partial Fulfillment of the  
Requirements for the Degree of  
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March, 1963

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## INTRODUCTION

General Problem--Early studies in perception fell within what has come to be known as the tradition of stimulus determination. This is the view that the external stimulus determines the perception. The emphasis was on a detailed analysis of the characteristics of the external stimulus and the search was for comprehensive laws relating the physical environment on the one hand and the subjective experience on the other. The early work started with the object and went to the person, and it generally asked the question: "What does the environment do to the perceiver?"

Both Allport (1955) and Ittelson and Kutash (1961) point out, however, that in the past decade or so this approach in perceptual research has in part been reversed. Many contemporary investigators conceptualize the perceptual process as starting with the person and working toward the object. They generally ask the question: "What does the perceiver do to the environment?" The shift, then, is from considering perception as a passive reaction to external events toward considering perceiving as a process actively carried out by the perceiver.

Directive-State theory, as described by Allport (1955), postulates that such conative phenomena as needs, tensions, values, defenses and emotions, as well as the individual's past experience, are important determinants of perception; and that research techniques must treat them as bonafide independent variables rather than neglect them or attempt merely to control them as the earlier "formal" theories of perception did. There is a

considerable amount of experimental support for this position. Factors such as bodily needs, reward and punishment associated with the perceiving of objects, values characteristic of the individual, the value of objects to the individual, personality characteristics of the perceiver, and emotionally disturbing significates of stimuli have all been established as important determinants of perception (Allport, 1955, pp. 309-319).

Also concerned with the inner determinants of perception is the theory of Transactional-Functionalism (Allport, 1955; Ittelson, 1952; Ittelson and Kutash, 1961; Kilpatrick, 1952, 1961). This position holds that the process of perception involves a dynamic transaction between the perceiver and the perceived, or, stated differently, between the organism and the environment. In this transactional process the perceiver responds to cues in his environment on the basis of unconscious assumptions that he holds about the environment which have developed out of his past experiences. These assumptions, whether true or false for the immediate circumstances, constitute the basis for the present percept. In Allport's words, "As the organism assumes, so it will perceive" (1955, p. 279).

From the standpoint of Transactional-Functionalism perception is purposive; it is the process by which an individual attributes to his environment the significances which he has found from previous circumstances to have furthered or obstructed his purposes. The purposes involved include those stemming from the values and goals that the individual acquires in social relation-

ships with various reference groups in his environment. Again, according to Allport, "The process of living can be construed as the achieving of the individual's values through the physical and social environment via action and the perceptual process" (1955, p. 280).

This theory has produced considerable research done mainly by the late Adelbert Ames and his students (Ames, 1955; Ittelson, 1952; Kilpatrick, 1952, 1961). By using various experimental arrangements such as the "distorted room", a rotating trapezoidal window, and aniseikonic glasses (Kilpatrick, 1952), these writers have clearly demonstrated that the individual's assumptions about the nature of the object tend to shape his perceptions even when these assumptions are quite incongruent with the proximal stimulation pattern resulting from the object. They have also shown that these assumptions, which operate immediately and unconsciously, are very tenacious and may often persist when the person "knows" (through investigation) the true state of affairs and realizes that it does not justify the perception to which his assumptions lead. The Transactional-Functionalist position is especially relevant to this study both because it concerns itself chiefly with the inner determinants of perception, and also because the apparatus used was developed as a result of researches based on this theory.

Ittelson and Slack (1958) apply the Transactional point of view to the perception of people as visual objects. They emphasize two groups of characteristics which they believe to be particularly



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important for our understanding of the visual perception of people: familiarity and emotional loading. They further state that these two characteristics might be called object familiarity and object cathexis, except that it is incorrect to imply that they are properties of objects alone. Neither, however, are they purely properties of the individual. According to these authors, "Both the object and the subject are necessary for the definition of these characteristics in any concrete case, for they are characteristics of the relationship (transaction)\* which exists between subject and object" (1958, p. 215). This is not to say that these two factors do not enter into all object perception, but rather that they operate significantly in the visual perception of people who are real and important to us.

As regards object perception in general, the effects of these two factors have been established in various experimental arrangements. For example, in studying recognition thresholds with the tachistoscope, both Howes and Solomon (1951) and Solomon and Postman (1952) demonstrated a relationship between frequency of prior usage (familiarity) and decreased recognition thresholds for verbal stimuli. Also, in studying the effects of object value (cathexis) and estimation of object size, a number of studies have demonstrated differential size perception as a function of differential object value (Bruner and Goodman, 1947; Bruner and Postman, 1948; Lambert, Solomon and Watson, 1949; Ashley, Harper and Runyon, 1951; Beams and Thompson, 1952; Gilchrist and Nesberg, 1952). The

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\* Parenthesis mine.



objects of perception in these studies included coins, pokerchips, and photographic images of articles of food, etc. The general finding running through these studies is that valued objects tend to be overestimated in size, and that generally the overestimation varies directly with the amount of value the object has for the perceiver.

Studies involving the perception of persons in which the subject wears aniseikonic lenses have produced results in line with Ittelson and Slack's statement concerning the importance of familiarity, and especially emotional loading, in this realm of interpersonal behavior (Wittreich, 1953; Wittreich, 1955; Wittreich and Radcliffe, 1956). These three studies suggest that, when an observer views another person through aniseikonic lenses, the perceived distortion is inversely related to the significance of the relationship between the two persons.

Engel (1955, 1956a, 1956b) has studied person perception under conditions of binocular rivalry. With the use of a stereoscope the subject is presented with a different image to each eye, and the perceptual integration, which may be one of a number of different general effects, is noted. Employing such stimulus arrangements as two male faces, a male and a female face, upright and inverted faces, and face-genital combinations, Engel has shown that the resolution of the binocular stimulus rivalries depends both on familiarity and emotional loading. The general effect is not so clear cut here, however, and the relative influence of familiarity and/or emotional loading appears to differ with the

various stimulus arrangements.

Another device used by the Ames group is the Thereness-Thatness apparatus (Kilpatrick, 1952, 1961). The name derives from the object quality-distance judgment relationship; e.g., that the estimation of the distance of a stationary object (ball) depends upon what class of object (ping-pong ball, tennis ball, etc.) it is assumed to be. With this apparatus it is possible to study the effect of emotional loading on the distance at which an object is perceived, and it has been used in a number of studies on person perception with photographs of self and others as the test stimuli. A reduced-cue situation is employed here to show the effects of emotional loading on size-distance perception by reducing insofar as possible all such external monocular cues to size-distance variability as object size, linear perspective, interposition, serial perspective, shadows and movement. The important distance cue of binocular disparity is also eliminated with respect to perception of the test stimulus. The subject is confronted with two visual fields which are separated by a partition. One field is seen monocularly, the other binocularly. In the binocular field there are a number of distance markers situated at different positions along the depth of the field. The perceptual (test) stimulus is presented in the monocular field, which is devoid of distance cues as described above, and the subject attempts to align it with the designated marker in the binocular field by means of a lever or wheel which changes its position or size (apparent position). Although the subject

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performs this readily, he is unaware of the fact (a) that he is performing the feat of projecting a subjective estimate of the actual size of the stimulus object, (b) that he is making his distance settings on the basis of this projected or assumed size, and (c) that the experimenter from his distance settings can make inferences concerning this projected size and thus of such characteristics of the stimulus object as its familiarity and emotional loading (Ittelson and Slack, 1958, p. 225).

Smith (1953, 1954) did two interesting experiments with this technique which demonstrated a relationship between size-distance perception of human faces (photographs) and the emotional meanings attached to the faces. Using the Thereness-Thatness apparatus, he studied the settings of pleasant and unpleasant faces. In both cases he found that pleasant or less threatening faces tended to be set larger than did unpleasant or more threatening faces. The stimuli in Smith's studies were projected onto a screen in the right visual field by means of a Clason projector. This device makes it possible to change the size of an image while holding focus constant. Since in the Thereness-Thatness apparatus a change in stimulus size appears as a change in stimulus distance, the statement that the pleasant faces were set larger is equivalent to saying that these faces were set closer than the unpleasant faces were.

In the first study (1953) he had subjects set photographs of faces taken from the Frois-Wittmann (1930) series which depicted expressions of happiness (pleasant) and rage (unpleasant). The



photographs were accompanied by verbal descriptions of the depicted expressions in order to heighten the emotional tone produced by each photograph. When the appropriate descriptions accompanied each photograph, the pleasant faces were set larger than the unpleasant ones. When the verbal accompaniments were reversed, that is, pleasant accompaniment with unpleasant face and unpleasant accompaniment with pleasant face, the unpleasant faces were set slightly larger than the pleasant ones were. This suggests that the emotional tone produced by the accompanying information helped to heighten or mitigate the general effect depending on the agreement or disagreement between the information and the expression in the photograph.

In his discussion Smith suggested that the explicit responses were a function of implicit conditions within the subjects which formed a frame of reference for evaluating the faces. Smith's general conclusion is that the subjects responded to the meaning which the faces elicited in the situation; and that this meaning emerged out of the assumptions, attitudes, expectations, purposes and special sensitizations which the subjects had acquired through experience. Moreover, such meaning tends to occur with implicit reference to the self-concept of the individual. The shifts in the settings which occurred when the experimenter altered the verbal descriptions shows that perception of the closeness of a human face literally changed before the eyes of the subjects as a function of alterations in their beliefs, assumptions and expectations.

In a second experiment Smith (1954) studied this same phenomenon in connection with two test measures of personality adjustment and security. Using an adaptation of the Thereness-Thatness apparatus, he asked subjects to merely locate pleasant and unpleasant faces (same as in the previous study) with respect to themselves, i.e., to vary the distance of the picture from themselves until they were most comfortable. After this, the subjects were given the Bell (1934) Adjustment Inventory, Student Form and the Knutson (1948) Personal Security Inventory. It was found that subjects with high scores on both tests tended to set both pleasant and unpleasant faces larger and thus--in terms of the Thereness-Thatness illusion--closer to themselves than did subjects with low scores. According to Smith, this serves to illustrate the continuous pressure of inner securities and adjustmental tendencies on the sort of personal distances which are spontaneously established by a person between himself and others.

A number of more recent studies done at the Veteran's Administration Hospital, East Orange, New Jersey have also employed this apparatus in studying person perception. Ittelson and Slack (1958) used it for studying children as they view their own photographs and those of other children. Although no consistent trend as a function of age was found, these authors did notice a slight but consistent tendency for subjects of all age groups to set the self picture differently from pictures of other children. Brophy and Walder (1961) had normal subjects



set their own photographs as well as those of strangers. In all cases the self picture was set consistently differently from that of the stranger. Ittelson, Hoch and Kaufer (1961), working with patients in a group therapy situation, had each patient in the group make settings of a photograph of the following persons: (a) the member of the group whom he liked best as judged by the co-therapists, (b) the member he liked least, (c) the two therapists and (d) himself. Significantly different settings were obtained between the self and the least liked, between the most liked and the least liked, and between one therapist and the least liked. Wilner (1961) took sociometric measures on ward patients. Each patient subsequently made settings of photographs of himself and other patients selected on the basis of the sociometric data. Preliminary results again show significantly different effects for the self picture, and they suggest that both highly disliked and highly liked persons are equivalent on this task and both are set differently from relatively neutral persons. As Ittelson and Slack note, a general conclusion can be drawn from the above studies. This conclusion is that the apparent metric properties of photographs of persons, as measured in this experimental situation, are influenced by the affective relationship between the subject and the person photographed (Ittelson and Slack, 1958, p. 226).

The Thereness-Thatness apparatus has also been used to investigate perceptual tendencies as a function of general personality orientations. Kaufer (1961) screened male subjects according

to Horney's (1945) trichotomous classification of personality orientations. This classification differentiates people on the basis of their general tendencies to "move-toward", "move-against", and "move-away" in interpersonal relationships. In this study the subjects personality orientations were determined with respect to both men and women. In the perceptual task on the Thereness-Thatness apparatus the subjects were required to make size-distance settings on each of six objects: a three-quarter sized playing card, a cube, a male figure, a female figure, a male genital symbol and a female genital symbol. Kaufer concluded that general personality orientation is significantly related to performance on the Thereness-Thatness apparatus. His principal finding was that subjects with a "moving-toward" orientation tended to place objects further away when attempting to align them with a specified marker than did subjects with a "moving-away" orientation. In terms of the Thereness-Thatness demonstration this means that the "moving-toward" subjects tended to see the objects as larger and closer than did the "moving-away" people. For the population of this study, this effect was significant for the personality orientation in relation to men, but not in relation to women.

This investigation also employed the Thereness-Thatness apparatus in studying the relationship between a basic personality orientation and size-distance perception. More specifically, perception of relevant others was studied in connection with different levels of individually reported self-ideal discrepancy.

The main experimental question to be answered was: How does a discrepancy between the way a person feels he is and the way he would like to be affect his size-distance perception of other people who are relevant to his self-ideal discrepancy.

In personality theory the concept of the "ideal self" is commonly considered as fundamental to an understanding of human behavior. Psychoanalytic theory describes the ego-ideal as being an important aspect of the super-ego, functioning both as a basic source of motivation and also as a determinant of psychical pleasure and pain (Fenichel, 1945; Freud, 1927). According to psychoanalytic point of view, such conditions as guilt and loss of self-esteem can result from a failure on the part of the ego to live up to the demands of the "ego-ideal". In reference to this important psychical agency Freud stated, "From analysis of the delusion of observation we have come to the conclusion that in the ego there exists a faculty that incessantly watches, criticizes and compares, and in this way is set against the other part of the ego. In our opinion, therefore, the patient perceives within his ego the rule of a faculty which measures his actual ego and all his activities by an "ego-ideal" which he has created for himself in the course of his development" (Freud, 1935, p. 371). Karen Horney (1937, 1945, 1950) made this concept central to her theory of personality, and she described the basic neurotic conflict as involving a repudiation of the real self in the interest of realizing the prideful and arrogant ideal



self. Carl Rogers (1951, 1954, 1959) employs this concept in his theory of personality and in his "Client-Centered" approach to psychotherapy. Rogers sees the basic source of emotional maladjustment as residing in a contradiction between expectations and actual experiences. This unfortunate state of affairs is largely determined by an inner discrepancy between the individual's felt self, which reflects what he actually is, and his ideal self, which dictates with varying degrees of urgency what he would like to be. According to Rogers, in successful psychotherapy this painful endo-psychic gap is closed so that the felt self and the ideal self are able to exist in closer harmony with one another.

In all three of the above theories the ideal self, or ego-ideal in psychoanalytic terminology, is conceptualized as an important endo-psychic seat of values, goals and aspirations which continually calls upon the adaptive efforts of the total personality for attention and fulfillment. Put differently, it may be viewed as a source of tensions within the personality which necessitates the development of tension-reducing adjustive and/or defensive techniques. In the case of high self-ideal discrepancy in which these tensions are excessive, or at least relatively so compared to the condition of low self-ideal discrepancy, it seems logical to infer that the adjustive and/or defensive needs of the individual should be proportionately more intense. Since it has been documented earlier that perception is affected by internal as well as external factors (Allport, 1955), it can further be inferred from the above model that the perceptual processes of the

individual will be affected by the magnitude of his self-ideal discrepancy as this interacts with and calls upon his adjustive and defensive techniques. In the language of Transactional-Functionalism, the conditions of high self-ideal discrepancy, as compared to low self-ideal discrepancy, may contribute to different assumptions about the self and the environment which may in turn mediate different perceptions of relevant persons, objects and events.

Thus far an attempt has been made to sketch some developments in experimental and clinical psychology that provide the essential theoretical and empirical background for the study reported here. Of central importance is the relatively recent approach in the field of perception which lays stress on the "inner" determinants of perceptual processes, and which insists that in perceptual research personality factors must be treated as bonafide independent variables and studied accordingly. Equally important is the concept in personality theory of the ideal-self, especially as it relates to self evaluation and thus contributes to the condition of self-ideal discrepancy. The present study, in investigating the effects of different levels of self-ideal discrepancy on the visual perception of human images, is thus essentially related to both the "new look" in perception, which stresses inner determinants, and to personality theory insofar as it is concerned with the problem of the ideal self.

Present Study--In this experiment the measure of self-ideal discrepancy was taken with respect to three value areas that are



considered to be important in middle-class American culture. These areas were labeled intellectual, physical and social. The experimental stimuli were three life-sized photographs of the faces of college-age males. Each of these was depicted as a superior achiever in one of the above value areas.

The first independent variable studied was magnitude of self-ideal discrepancy. On the basis of Ittelson and Slack's (1958) transactional interpretation of person perception, it was expected that in some relation to the magnitude of the subject's self-ideal discrepancy the size-distance characteristics of the images of other people conceptually relevant to the discrepancy would be distorted in the Thereness-Thatness apparatus. Specifically, Hypothesis 1 was that high self-ideal discrepant subjects would perceive the stimuli as larger and closer than would low self-ideal discrepant subjects. The direction of the hypothesized size-distance distortions was based on two sources of information. One is the group of studies cited earlier which demonstrate the relationship between differential object value and differential size perception. In reference to this phenomenon Allport states, "The perceived dimensional properties of an object are altered (accentuated) by the relevance of the object to some need of the individual" (1955, p. 312). Since the term self-ideal discrepancy implies the notion of self-dissatisfaction or self-devaluation, it follows that people high on this variable should have stronger needs for culturally valued talents and characteristics than would people who are low on the variable. Accordingly,

then, the high self-ideal discrepant subjects would be expected to show greater relative size estimation of the experimental stimuli (faces depicted as outstanding achievers) than would the low self-ideal discrepant subjects. The other source of information is the first study by Smith (1953). Smith's subjects dependably set the unpleasant (threatening) faces smaller (farther away) than the pleasant faces. Taking into consideration that the subjects were attempting to spatially align the faces with a fixed marker, and that perceptual distortions of the size-distance characteristics of the stimuli would contribute to compensations in the opposite direction, it follows that the unpleasant faces were set smaller (further away) because they were initially perceived as larger (closer) than the unpleasant faces. If one can generalize that when the subject is threatened or made uncomfortable in this apparatus he tends to perceive the stimuli as larger and closer than when he is unthreatened, then it seems logical from this line of reasoning also that the high self-ideal discrepant subjects, with their greater sense of self-dissatisfaction and thus greater threat-proness, would be more apt to be threatened in confronting the images of high achievers and thus more apt to overestimate the size characteristics of the images.

A second independent variable studied was that of defensive orientation. Since the concept of self-ideal discrepancy can be seen as a source of secondary or learned drives (needs) within the personality, the subjects were also screened for defensive orientation in order to study analogues of the important clinical

variables of drive and defence in their individual and combined effects on the perceptual behavior in question. The defensive tendencies observed were those toward "sensitization" and "repression" which have been investigated in a number of other researches (Altrocchi et. al., 1960; Byrnnne, 1961; Gordon, 1957). With respect to the relation between this variable and self-ideal discrepancy, Altrocchi et. al. (1960) have demonstrated that repressors and sensitizers, as measured by a constellation of MMPI scales, tend to report different self-ideal discrepancies because of basically different tendencies in their principal ego-defensive modes. According to these authors, repressors tend to report lower self-ideal discrepancies because they tend to deny their negative characteristics to themselves. Conversely, sensitizers tend to report higher self-ideal discrepancies mainly because of their tendencies to emphasize their negative self characteristics. The former defensive mode is principally oriented toward threat avoidance; the latter toward threat confrontation, apparently for purposes of ultimate defence through intellectual mastery. In line with these findings it was expected that the sensitizers would tend to reflect the high self-ideal discrepant trend and that repressors would reflect the low. Hypothesis 2, then, was that the sensitizers would see the stimuli as larger and closer than would the repressors. As a corollary of Hypothesis 1 and 2, it was expected that in the combined effects of the drive (self-ideal discrepancy) and defence (sensitization vs. repression) variables the stimuli would be seen as largest and



closest by the high self-ideal discrepant sensitizers and smallest and farthest away by the low self-ideal discrepant repressors. These hypotheses were based on the assumption that by emphasizing their negative characteristics to themselves the sensitizers magnify the self-devaluation implied in the concept of self-ideal discrepancy; and conversely, the repressors, by denying their negative characteristics to themselves, minimize this self-devaluation.

A third independent variable studied along with magnitude of self-ideal discrepancy and defensive mode was that of the position of the various value areas within the subject's value hierarchy. As mentioned above, three value areas labeled intellectual, social and physical were represented in this hierarchy. It seems logical that the relative importance of a value area to an individual should affect the emotional loading attached to a stimulus associated with the area, and hence the individual's perception of that stimulus. Hypothesis 3, then, was that for both magnitudes of self-ideal discrepancy there would be a tendency for stimuli representing highly valued areas to be seen as larger and closer than stimuli representing less highly valued areas. Again the rationale for this hypothesis is provided by the established relationship between differential object value and differential size perception. In addition to this general tendency, it was expected that the high self-ideal discrepant group relative to the low self-ideal discrepant groups would show a more pronounced differential response

to high-valued stimuli than to low-valued stimuli. Thus Hypothesis 4 was that in the interaction between self-ideal discrepancy and position in value hierarchy, the gradient for the high self-ideal discrepant group across the three value stimuli would be steeper than the gradient for the low self-ideal discrepant groups.

Summary of Hypotheses--Following is a summary of the hypotheses and related expectations pertinent to the three independent variables of this study.

#### Hypothesis 1 Self-Ideal Discrepancy

The high self-ideal discrepant Ss were expected to perceive the stimuli as larger and closer than were the low self-ideal discrepant Ss.

#### Hypothesis 2 Defensive Mode

The sensitizers were expected to perceive the stimuli as larger and closer than were the repressors.

As a corollary to Hypotheses 1 and 2, and with respect to the combined effects of these two variables, there was the additional expectation that the high self-ideal discrepant sensitizers would perceive the stimuli as largest and closest, while the low self-ideal discrepant repressors would perceive them as smallest and furthest away. No particular expectations were attached to the other groups (high self-ideal discrepant repressors and low self-ideal discrepant sensitizers).



Hypothesis 3 Position in Value Hierarchy

For all Ss, stimuli representing highly valued areas were expected to be perceived as larger and closer than stimuli representing less highly valued areas.

Hypothesis 4 Self-Ideal Discrepancy - Position in Value Hierarchy Interaction

The gradient for the high self-ideal discrepant group across the three value stimuli was expected to be steeper than the gradient for the low self-ideal discrepant groups.

## METHOD

Experimental Design--Table 1 summarizes the design of the experiment. Subjects were screened for magnitude of self-ideal discrepancy by means of a questionnaire constructed by the experimenter which was put into a format similar to that of the Bills, Vance and McClean Index of Adjustment and Values (1951). In the same sitting the Ss were also screened for defensive mode by use of an MMPI scale developed by Byrme (1961). The screening was done with groups of about 25 Ss, and a total of 194 were given the two tests. The Ss were undergraduate males enrolled in the introductory psychology courses at the University of Massachusetts.

In the second phase of the experiment the 72 Ss selected for the various experimental groups were run individually through the perceptual task on the Thereness-Thatness apparatus. In this task each subject made three distance judgments on each of three stimuli at two positions in the apparatus, giving a total of 18 experimental judgments for each S. The experimental stimuli consisted of full-faced, life-sized, black-and-white, semi-matte photographs of the faces of three college aged males each of which was depicted as a superior achiever in either the intellectual, social or physical value area.

The self-ideal discrepancy groups as they were selected (low self-low ideal, high self-high ideal, and low self-high ideal) represented all three meaningful dichotomous combinations of three variables: a self variable, an ideal variable, and an ideal minus

Table 1

## Summary of Experimental Design

Self-Ideal Discrepancy Groups	Defensive Mode Groups	Stimuli and Stimulus Distances in Thereness Thatness Apparatus					
		D <sub>1</sub>			D <sub>2</sub>		
		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>
Low Self-Low Ideal (A <sub>1</sub> )	Repressor (B <sub>1</sub> )	n = 12*					
	Sensitizer (B <sub>2</sub> )	n = 12	"	"	"	"	"
	Repressor (B <sub>1</sub> )	n = 12	"	"	"	"	"
High Self-High Ideal (A <sub>2</sub> )	Sensitizer (B <sub>2</sub> )	n = 12	"	"	"	"	"
	Repressor (B <sub>1</sub> )	n = 12	"	"	"	"	"
Low Self-High Ideal (A <sub>3</sub> )	Sensitizer (B <sub>2</sub> )	n = 12	"	"	"	"	"

\*Each S made 3 judgements on each stimulus at each position for a total of 18 judgements per S.

self (or self-ideal discrepancy) variable. The combination high self-low ideal is rare and illogical, and thus was not included. These groupings were done purposely in order to control for confounding in the interpretation of the final results. Since self-ideal discrepancy is a dyadic variable involving two distinct parts and their interrelationship, and as such offers difficulties in interpretation (Altrocchi, 1961; Cronbach, 1958), it was necessary to arrange the self-ideal discrepancy groups in such a way that relatively independent assessments could be made of the self and ideal variables. As the groups were arranged: low self could be compared to high self with ideal held constant by a comparison of the high self-high ideal and low self-high ideal groups using only two thirds of the data; and the low ideal could be compared to high ideal with self held constant by comparing the low self-low ideal and the low self-high ideal groups using only two thirds of the data. In addition, the three groups considered as qualitatively different categories could also be compared just as they stood. If only two groups had been selected--a low and a high self-ideal discrepancy group--it would not have been possible to parcel out separate tests of the self and ideal variables and thus throw more light on the interpretation of the self-ideal discrepancy variable by virtue of these.

Self-Ideal Discrepancy Questionnaire--The questionnaire consisted of 60 short, self-descriptive statements of the form generally employed by Rogers in his self-ideal Q-sorts (Rogers and Dymond, 1954) -- see Appendix A. Forty two of the items were relevant to the three value areas in question, with 18 buffer items



from one of Roger's lists randomly interspersed among them.

The 42 value-relevant items were divided into three groups of 14, each group being applicable to one of the value areas under investigation, and each subdivided into 9 value-positive and 5 value-negative items. The value-relevant items in each group were randomly distributed so that no value area was particularly connected with any portion of the questionnaire.

The intellectual value area was conceptually similar to the theoretical value of the Allport-Vernon Scale (Allport, Vernon and Lindzey, 1951). "I am especially interested in improving my mind", and "I don't care much for reading", are examples of intellectual value-positive and value-negative items, respectively. The physical area concerned itself mainly with direct bodily attributes and the physical-athletic skills deriving from them. Reference is made to a similar concept by Kluckhohn and Murray in an allusion to the Spranger values in Kluckhohn, Murray and Schneider (1954, p. 23). "I am a good athlete", and "I have an unattractive physique", are examples of physical value-positive and value-negative items, respectively. The social value area, as defined in this study, referred primarily to interpersonal skills that make for popularity and influence among one's acquaintances. "I conduct myself smoothly at social functions such as dinner parties, dances and dates, etc.", and "I am shy", are examples of social value-positive and value-negative items, respectively.

As mentioned previously, the format of the self-ideal

discrepancy questionnaire was similar to that of the Index of Adjustment and Values (Bills, Vance and McClean, 1951). Ss first rated each item in terms of its degree of applicability to their "actual self". They then went over the items again and rated each one in terms of its degree of applicability to their "ideal self-concept". The rating of each item was done by assigning a number for 1 to 5 which best determined the item's applicability to the aspect of self under scrutiny. One represented minimal and 5 maximal applicability; the qualitative designations being: 1--applies hardly at all, 2--applies a little, 3--applies moderately, 4--applies a good deal, and 5--applies very much. In determining the measure of self-ideal discrepancy, the numerical differences of the two ratings without regard for sign was gotten for each item and then the sum of the differences over all value-relevant items was taken. Consequently, high agreement between the ratings for self and ideal would produce a small sum of differences and thus a low index of self-ideal discrepancy. Low agreement between the two would in converse manner produce a high index of discrepancy.

The individual's value hierarchy was also assessed in the questionnaire. That is, a rank-ordering of the intellectual, social and physical value areas in terms of the Ss' preferences was obtained. In the assessment of the value hierarchy only the 27 value-positive items were used. They were arranged in nine "trios", each "trio" having one item per value area in it. The S, while bearing his ideal self-concept in mind, established his preference for the items in a "trio" by assigning to each a

number between 1 and 3. One denoted maximum preference, or first choice, and 3 minimum preference, or third choice. The sum of the choices for the items pertinent to each value area could then be taken over the nine "trios" and the rank order of the value areas established. In this arrangement the lowest total would indicate the most preferred area and the highest total the least. The assessment of the value hierarchy was obtained in order to study in the perceptual task the third independent variable--position in the value hierarchy.

In constructing the questionnaire a pool of items was written under each value area. These were then distributed to three psychology professors and a professor of education for suggestions. The items with the best face validity were then put into a questionnaire and given to 17 undergraduate males enrolled in the summer session at the University of Massachusetts. Suggestions were also solicited from each of these students in the interest of discarding items that were ambiguous, inappropriate, etc. In order to further check the validity of the items, a revised questionnaire was then given to three groups of students on the campus who by their commitment to certain activities could be inferred as having strong interests in one of the value areas in the questionnaire. The groups were, respectively: 14 senior physical education majors, representing high physical interests; 12 fraternity social chairmen, representing high social interests; and a group of 11 students of junior-senior or graduate status whose majors were either



psychology, mathematics or philosophy, these latter representing high intellectual interests.

The rationale behind this procedure was that if the items were sufficiently valid the committed groups would show this by giving first choice in their value hierarchy to the items reflecting their chosen activity. The questionnaire was given to the students in the designated groups, and each student's preference order calculated. The different areas were then given a rank of 1, 2 or 3 according to the students' preferences, and these ranks were summed over the students in a group. The results, expressed in Table 2, represent a total of the ranks for each value area for the students in each group. They show that both the social chairmen and the "intellectual" majors had the lowest scores in the areas reflecting their chosen activity (lowest scores meaning highest preference), while the physical education majors produced a first preference tie between social and physical with intellectual least preferred.

Test for Defensive Mode--A modification of the R-S scale developed by Byrme (1961) was used to screen the Ss for defensive mode--see Appendix B. Byrme's scale is essentially equivalent to the test used by Altrocchi et. al. (1960) for screening repressors and sensitizers, although Byrme has introduced structural changes that make his scale easier to score. It consists of 182 MMPI items, 156 of which are relevant to the sensitizer-repressor dimension, with 26 buffer items randomly interspersed. In the modification used in this study only the 156 defense-relevant items

Table 2

Ranks for Value Areas by "Committed" Groups

	Value Area			
	Intellectual	Social	Physical	
Intellectual Majors	12*	22.5	31.5	n=11
Social Chairmen	26	15*	31	n=12
Physical Education Majors	34	25	25*	n=14

\* Score reflecting chosen activity

were used, there being no apparent reason for including the buffer items.

In taking this test the subject merely decides whether each item is essentially true or false with respect to himself and then marks an IBM answer sheet accordingly. The test is designed in such a way that, as the number of responses in agreement with the scoring key increases, the inferred tendency toward sensitization also increases. Thus, high scores suggest sensitizing tendencies and low scores repressing tendencies, with the inferred tendencies increasing as the scores approach their extremes of 156 and 0, respectively.

The Altrocchi test, from which Byrnne's scale derives, consists of a combination of six MMPI scales which are designed to tap the tendencies toward sensitization and repression, and which draw heavily on the original psychasthenia and hysteria scales--the tendency toward sensitizing defences being conceptually related to psychasthenia, and the tendency toward repressive defences to hysteria. The design of the test, in contrast to that of Byrnne's scale, is such that high positive scores reflect repressing tendencies and high negative scores sensitizing tendencies. That is, the T scores for D (depression), Pt (psychasthenia) without K, and A (anxiety), which reflect the sensitizing tendency, are subtracted from the T scores for L (lie), K (defensiveness--in the sense of an unwillingness to concentrate on and divulge negative self characteristics), and Dn (denial), which reflect the repressing tendency (Altrocchi et. al., 1960).



### Selection of the Subjects for the Experimental Groups--

Twenty five of the 194 students given the self-ideal discrepancy questionnaire and R-S scale were discarded either because they rated their self higher than their ideal or because they produced a tie between two or three of the areas in their value hierarchy. The remaining 169 were plotted on a large graph with respect to their self and ideal scores. The self scores, which covered a range from -9 to 95 (with a possible range from -48 to 120), was plotted along the abscissa, and the ideal score, with a range from 60 to 120 (same possible range), was plotted along the ordinate. Each plotted point had three additional bits of information: the S's number, a coded number from 1 to 6 giving the sequence in his value hierarchy, and his score on the R-S scale. By means of this device Ss could be put into one of the three meaningful combinations of the self and ideal variables: low self-low ideal, high self-high ideal, and low self-high ideal, with each combination having a higher ideal than self score. In actually selecting the Ss the E worked in from the extreme corner of each quadrant of the graph in order to keep the groups as divergent as possible. Figure 1 shows the 24 plots in each quadrant that were picked for the different levels of the self-ideal discrepancy groups.

The Ss were simultaneously selected for their tendencies toward sensitization or repression with this device. According to Byrne (personal communication), arbitrary cutting points for the two tendencies are commonly selected at the extremes of the

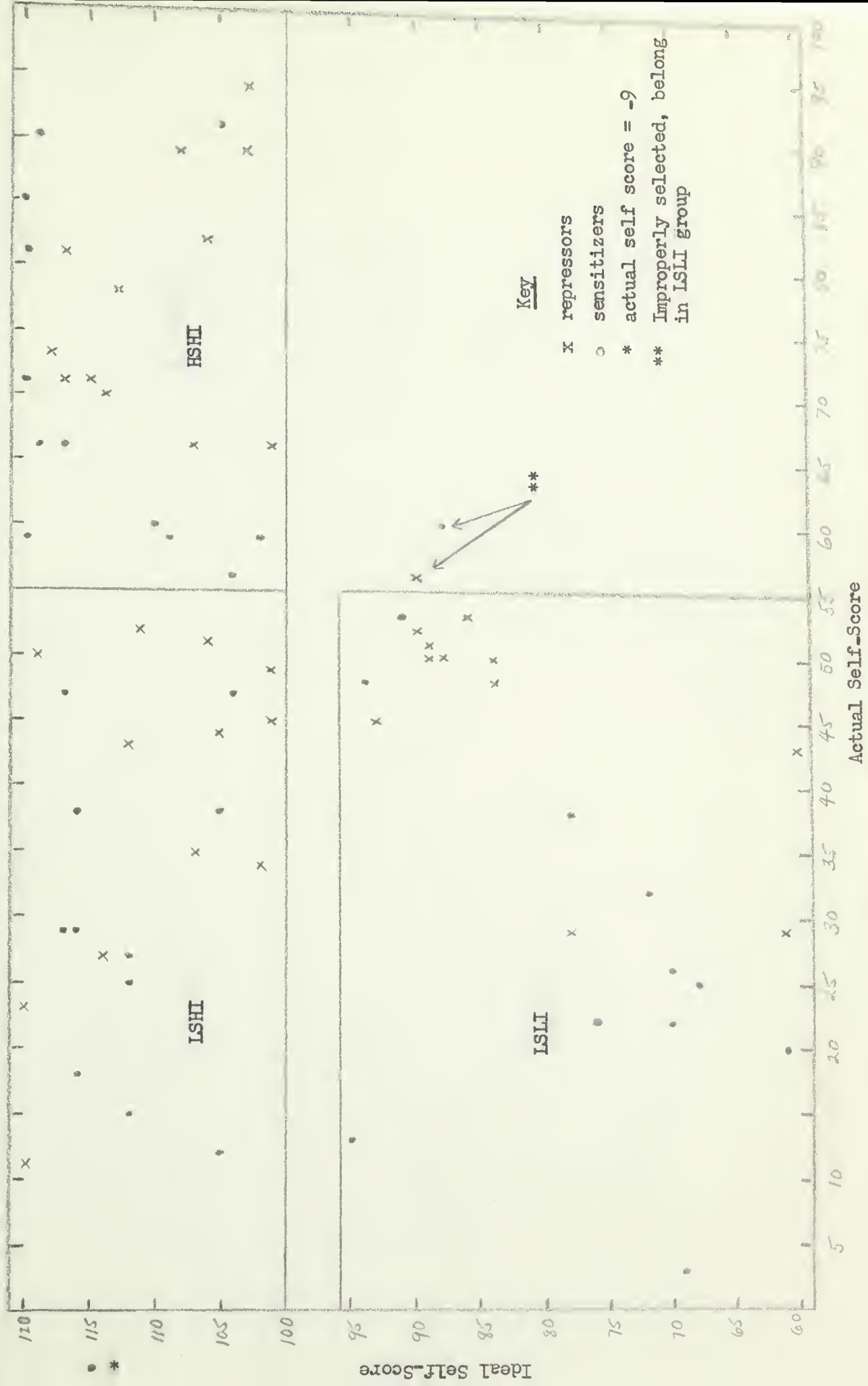


Figure 1 Graph for Selection of Different Self-Ideal Discrepancy Groups

R-S distribution. For example, Byrnnne (1961), in a study correlating R-S scores with the expression of aggressive and sexual themes on the TAT, defined sensitizers as those scoring above 78 and repressors as those scoring below 47 on the R-S scale. In the present study, however, it was not possible to get this magnitude of difference between the two cutting points, and a single cutting point of 70 was used to differentiate the two tendencies. That is, Ss scoring below 70 were defined as repressors and Ss scoring above 70 as sensitizers. Table 3 gives the scores for self, ideal, ideal minus self (self-ideal discrepancy), and defensive tendency (R-S) for all the Ss in all combinations of the self-ideal discrepancy-defensive mode variables. Mean scores are also given for high and low self, high and low ideal, high and low ideal minus self, and repression vs. sensitization.

Thereness-Thatness Apparatus--A diagram of the apparatus is shown in Figure 2. It represents a modification of the standard Thereness-Thatness apparatus as described by Hastorf (1950) and Smith (1953). It consists of two parallel visual fields separated by a partition, with the dimensions of each field being 10'6" in depth, 2' high, and 15" wide. The near end of the right field is covered by a section of plywood running from the partition to the right edge of the field. There is an aperture cut in this section which enables the subject, when he is properly positioned in the apparatus, to see into the right visual field. This aperture can be made smaller by lowering a plate hinged to the



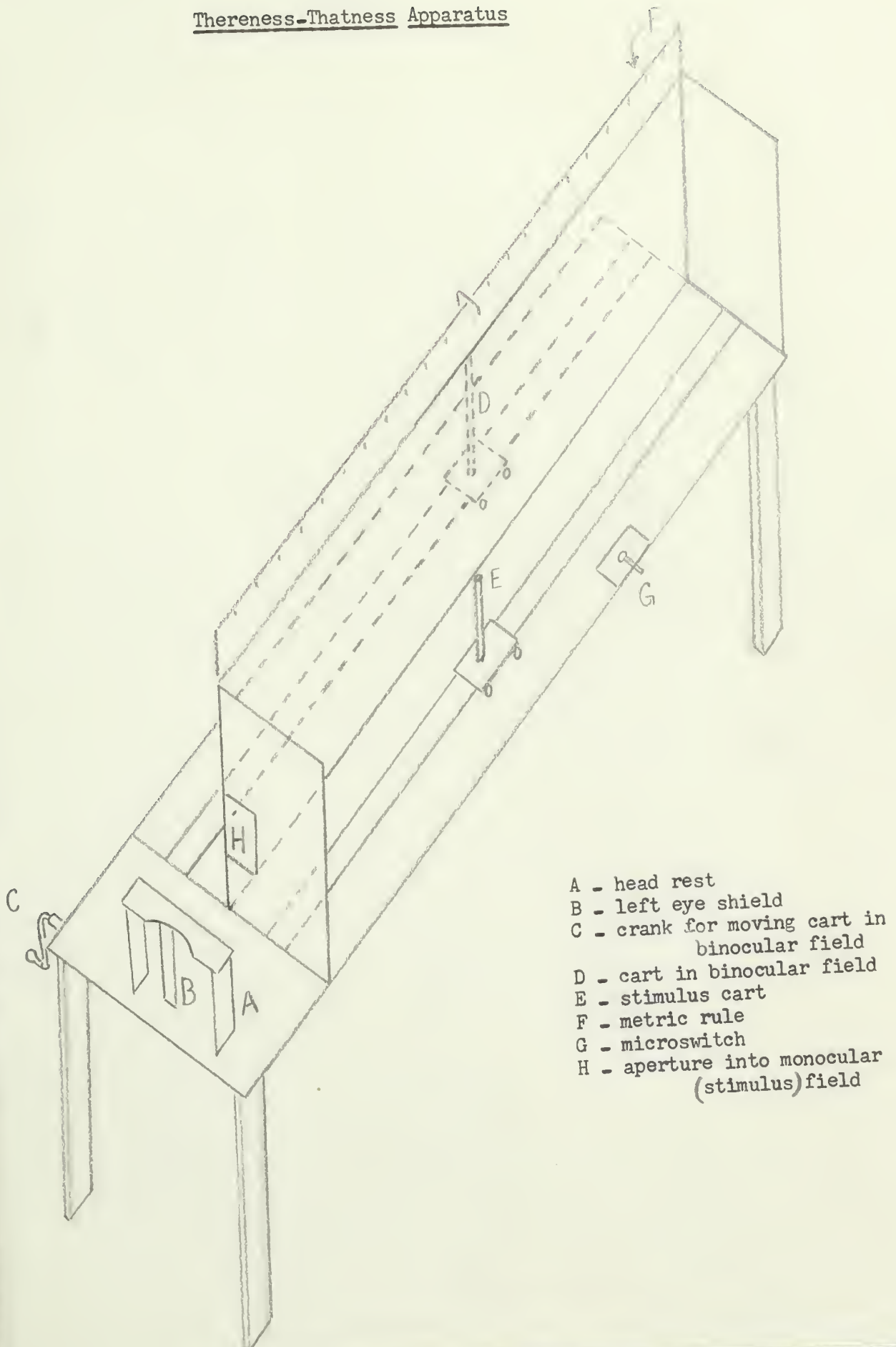
Table 3

Self, Ideal, Ideal Minus Self and R-S Scores for  
All Combinations of Self-Ideal Discrepancy and Defensive Mode

		Self	Ideal	Ideal-Self *	R-S
HSHI	R	76	110.9	34.9	57.5
	S	70.3	113.4	43.1	79.0
LSLI	R	46.3	75.2	28.9	63.2
	S	30.2	77.8	47.6	81.3
LSHI	R	38.7	109.8	71.1	58.1
	S	26.3	112.3	86.9	85.8
$\bar{X}$		47.9	99.9	51.9	70.8
High Self Mean		73.2			
Low Self Mean		35.4			
High Ideal Mean			111.7		
Low Ideal Mean			76.1		
High Ideal-Self Mean				78.6	
Low Ideal-Self Mean				40.2	
Sensitizer Mean					82.2
Repressor Mean					59.6

\* Ideal minus Self score (Self-Ideal discrepancy score)

Figure 2  
Thereness-Thatness Apparatus



plywood section. The near end of the left field is completely open.

There is a head rest 1' in front of the two visual fields with a small metal shield attached to it in such a way that it blocks the S's left eye view of the aperture leading into the right field. Thus, the right field is seen monocularly with only the right eye, while the left field is seen with both eyes.

In each of the visual fields there is a movable cart running on a track down the center of the field. The cart in the left field, which is connected to a crank near the S's left hand, carries a white vertical rod as a marker which is clearly visible to the S at all times. By manipulating the crank the S is able to position the marker at any point in the depth of the left visual field. The cart in the right field, which carries the stimulus, is moved by the E. It is equipped with a small light which directs a beam of constant illumination onto the stimulus, and which is powered by electrical contacts set in the track. In this experiment the stimulus could be set at two positions in the right visual field: a near position 92 cm. from the near end of both fields, and a far position 214 cm. from the near end of both fields. There is also a microswitch on the right side of the apparatus which is activated by an electrically driven cam. This switch, which is connected to the electrical contacts powering the stimulus light, enables the E to illuminate the stimulus for a constant amount of time in either of the two positions.



Set above the partition and running along the entire depth of the two visual fields is a metric scale calibrated in fifths of centimeters. A pointer attached to the white marker on the left cart is arranged in such a way that the E, standing on the right side of the apparatus, can accurately read the distance of the white marker from the near end of the two fields.

The left field is lighted by a series of seven low-wattage bulbs which illuminate it uniformly along its entire length. It is also supplied with a normal allotment of distance cues (grain of wood, linear perspective of floor and left sidewall, and all binocular cues). The right field is painted flat black and covered by a heavy black cloth so that when the stimulus light is off nothing can be distinguished in it at all, and, when the stimulus light is on, the stimulus appears to hover in a field of pitch-blackness. The establishment of pitch-blackness is done for the purpose of obliterating all such external monocular distance cues as relative size, linear perspective, interposition, elevation above artificial horizon, and shadows in the stimulus field. The metal shield on the headrest, which obstructs the S's left eye view of the aperture, eliminates the important binocular distance cue of retinal disparity. Also, when both eyes are in the proper position, the partition between the left and right fields is obscured from view and the two fields appear to merge.

As mentioned in the introduction, the reduced-cue situation is employed in order to minimize as much as possible the S's

ability to accurately localize the distance of the stimulus in the right visual field. This is done for the ultimate purpose of making inferences about the S's perception of the stimulus on the basis of his distance estimates of it, these being the dependent variable responses on this modification of the Thereness-Thatness apparatus. It is hypothesized that the S's projected size estimate of the stimulus, which is contingent upon his emotional cathexis of it (Ittelson and Slack, 1958), may cause the stimulus to appear displaced from its actual position in the right field, and that the amount of apparent displacement will be reflected in the S's distance estimate. A final supposition is that in this apparatus a stimulus whose size is over-estimated will appear closer than it actually is, and one whose size is under-estimated will appear farther away than it actually is.

Experimental Stimuli--The stimuli used were photographs of three graduate students at the University of Massachusetts. In preparing the stimuli, photographs were taken of five psychology graduate students and a graduate student in the department of zoology. The five psychology students were all finishing their work at the University, and at the time that the data was to be collected could be depended upon to be away at some other place. The zoology student, who was expected to still be working at the University, was selected because of the regularity of his features. All six models were selected because they had relatively average faces--faces that were neither exceptionally good or bad looking. Average faces were selected in order to minimize the possibility

that the stimuli would elicit strong emotional reactions apart from the social, intellectual and physical meanings attributed to them by the experimenter. In the final selection of the faces the zoology student and two psychology students were chosen mainly because they had the best facial expressions and were the most equivalent with respect to clarity of detail.

In posing for the photographer the models were instructed to effect a neutral but pleasant expression. The photographs were taken in full front view, and later enlarged to life-size proportions and cut out of their backgrounds. The final stimulus, then, resembled a real head looking right at the S with an expression of pleasant attention. These photographs were mounted on heavy cardboard and fitted with attachments for easily putting them on and taking them off the stimulus cart.

In collecting the experimental data, although a particular stimulus represented one value area throughout a particular S's trials, the three stimuli were randomly changed from one value area to another over different Ss with all permutations equally represented in all experimental conditions. This was done to avoid the possibility that any one face, having a particularly compelling connection to one of the value areas, would represent this value area throughout the experiment and thus create a permanent artifact in the stimulus conditions (faces plus verbal depictions).

Preliminary Data on the Descriptions of the Test Stimuli--A short pilot study preceded the actual experiment. This was done



both for the purposes of smoothing out the E's operation of the apparatus, and also to obtain some information on the validity of the verbal descriptions that were to accompany the experimental stimuli. After making a number of size-distance judgments of the stimuli accompanied by the verbal descriptions, the pilot Ss (undergraduate males at the University of Massachusetts) were asked for some information about their personal reactions to the descriptions. They were first asked to read the descriptions, which were unlabeled, and then place each one in either an intellectual, social or physical category. At the same time, they were asked to rate each description in terms of the degree of excellence of achievement it represented. In making their ratings they were instructed to assign one of four numbers to each description, the designations for each number being: 1 - average achievement, 2 - superior achievement, 3 - very superior achievement, and 4 - unrealistically superior achievement. In addition, they were asked two questions about the descriptions; namely, if they knew or had ever known anyone like the people depicted, and also, how they felt they themselves compared to the people described.

All nine pilot Ss placed the unlabeled descriptions in their appropriate categories. Thus, the possibility that the descriptions were unclear or ambiguous with respect to their proscribed value areas was ruled out. The averaged achievement ratings for the three areas were as follows: intellectual 2.88, social 2.44 and physical 2.55. These ratings suggest that the descriptions

pointed to levels of achievement between the "superior" and "very superior" levels in all cases. Such levels were considered optimal--that is, high, but not so high as to be unrealistic and thus difficult or impossible for the Ss to regard seriously. The general reaction to the two questions also reflected the "out-standing" but "believable" qualities of the descriptions. Seven of the nine pilot subjects knew or had known someone who resembled at least one of the descriptions. In comparing themselves, their reaction was invariably that of "dubious possibility" that they could achieve commensurately.

Procedure on the Thereness-Thatness Apparatus--The Ss were run individually in the perceptual task. After entering the room, they were seated in front of the apparatus and given general instructions--see Appendix C. They were told that the experiment involved the visual perception of different types of people, and that in the experiment they would see the faces of three seniors from a neighboring college who had appeared in their college newspaper during the Fall of 1962. The introduction emphasized that the seniors had appeared in the newspaper because they were outstanding individuals.

Before beginning the experimental trials with the faces, each S was given six warm-up trials--three at each stimulus distance--with the joker from a deck of playing cards as the warm-up stimulus. Specifically, the S was instructed to place his head in the headrest and raise a hinged shield up in front of his eyes. This shield, which was attached to the headrest, blocked the right eye

view into the right field, and also helped to obscure the between-trial movements of the E. (Besides changing stimuli, E had to lower the plate making the aperture smaller when the stimulus was in the far position, and raise the plate making the aperture larger when the stimulus was in the near position.) At the occurrence of a verbal "ready" signal from the E, the S was instructed to lower the shield and wait for the stimulus presentation. Approximately two seconds after the "ready" signal was given, the stimulus was illuminated for a period of four seconds. The S was instructed to wait until the stimulus light went off before he made his distance estimate by cranking the white marker to a position opposite that at which the stimulus had appeared. That is, S made his settings from memory, this condition being introduced in order to simulate the "passing" or transitory kind of perceptual situation in which the hypothesized distortion of size characteristics could be expected to occur. S was told to say "Okay" after he had completed his setting in order to signal to E that he could go ahead and record the distance on the metric scale. After securing his reading, E said "move", which was the signal for S to move the marker back to a common position in the center of the left field. Following this, S raised the shield and waited for the next "ready" signal which in turn introduced the next trial.

Immediately after the sixth warm-up trial, S was told that the experimental faces would follow and that each would be preceded by a resume of the appropriate newspaper article. The first time that a face was shown it was preceded by its entire descriptive paragraph--see Appendix D. On the five successive occasions



(each face appearing six times) it was accompanied by a fragment from the paragraph. This was done in such a way that the main points of the appropriate paragraph were chronologically re-stated in the succeeding presentations of each face. Thus, on each experimental trial, and immediately preceding the "ready" signal, a certain amount of information was given which was designed to give the visual stimulus (face) meaning with respect to one of the value areas.

On each trial the particular stimulus and the stimulus distance were varied. The variation was not random, however, the stimulus being consistently varied in the order value rank #1 - value rank #2 - value rank #3, while the position variable was consistently varied in the order near - far. That is, the first six stimulus presentations (representing trial one) were in the following order: value rank #1, near position; value rank #2, far position; value rank #3, near position; value rank #1, far position; value rank #2, near position; value rank #3, far position. This same sequence was repeated for trials two and three. There seemed to be no reason to completely randomize the stimulus-position sequence, and the above sequence seemed optimal for maintaining the S's interest.

The near - far distance variation was introduced for a methodological reason, namely, to guard against assumptions by the Ss that the stimuli were always in the same place. In this sense it had no interpretive significance in its main effect on the Ss' size-distance settings. However, it offered the possibility

of information arising from interactions between itself and the drive, defense and value hierarchy variables.

All Ss were run in a darkened room, this being done to enhance the reduced-cue situation in the right field of the apparatus. Also, a tape recorder producing a rather loud "white noise" was turned on between trials in order to mask any auditory cues that the Ss might get from the wheels of the stimulus cart as to the stimulus position on the ensuing trial.

## RESULTS

In the perceptual task, all 72 Ss had three trials on each of three stimuli at each of two distances for a grand total of 1296 scores. For purposes of analysis the experimental data were broken into four separate distributions of 432 scores each, three of them representing the scores for all Ss on each trial, and the fourth representing the mean of the three trials for all Ss. Before analysing any of the data a square root transformation was applied in order to make the variances of the distributions at the near and far stimulus positions approximately homogeneous.

Of principal interest were the scores for trial one and the scores for the mean of the trials. Trial one was important because it could be considered to be relatively free of any adaptation or habituation effects that might have set in over the latter two trials. The mean of the trials was important as an indication of the trends over all trials. Tables 4 and 5 show the means and variances for all cells in the experimental design for both trial one and the mean of the trials. Table 6 shows the means for the different levels of the experimental variables for both trial one and the mean of the trials.

Table 7 presents the analysis of variance for trial one with the three sampled self-ideal discrepancy groups treated as qualitatively different categories. None of the main effects for self-ideal discrepancy, defensive mode, or position in value hierarchy attained statistical significance. The main effect for stimulus



Table 4

Means and Variances of Square Root Scores in  
All Cells of the Total Design for Trial One

		D <sub>1</sub>			D <sub>2</sub>			
		C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	
A <sub>1</sub>	B <sub>1</sub>	Mean	10.490	10.112	10.249	14.868	14.575	14.851
		Var.	1.313	2.643	1.649	3.109	3.680	3.379
	B <sub>2</sub>	Mean	10.055	10.910	10.509	14.448	14.150	14.667
		Var.	2.629	1.564	2.446	2.423	3.288	2.450
A <sub>2</sub>	B <sub>1</sub>	Mean	9.883	9.877	9.953	14.286	14.329	14.932
		Var.	2.665	3.655	4.958	2.000	2.519	1.628
	B <sub>2</sub>	Mean	11.109	10.893	10.965	15.418	15.184	15.400
		Var.	1.195	1.780	1.451	1.009	1.317	1.311
A <sub>3</sub>	B <sub>1</sub>	Mean	10.266	10.110	9.930	14.700	14.226	14.595
		Var.	1.319	.701	1.411	1.524	2.307	2.328
	B <sub>2</sub>	Mean	10.450	10.621	10.388	14.884	14.494	14.845
		Var.	1.429	1.343	2.537	1.811	3.011	2.585
A <sub>1</sub>	LSLI	B <sub>1</sub>	Repressors	C <sub>1</sub>	Value rank 1	D <sub>1</sub>	Near position	
A <sub>2</sub>	HSHI	B <sub>2</sub>	Sensitizers	C <sub>2</sub>	Value rank 2	D <sub>2</sub>	Far position	
A <sub>3</sub>	LSHI			C <sub>3</sub>	Value rank 3			

12 scores in each ABCD cell; total = 432 scores

Table 5  
Means and Variances of Square Root Scores in  
All Cells of the Total Design for the Mean of Trials

			D <sub>1</sub>			D <sub>2</sub>		
			C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>
A <sub>1</sub>	B <sub>1</sub>	Mean	10.292	10.235	10.273	14.964	14.933	14.974
		Var.	1.379	2.362	1.431	3.328	4.079	3.075
	B <sub>2</sub>	Mean	10.468	10.732	10.610	14.530	14.512	14.712
		Var.	1.926	1.113	1.916	1.902	2.142	2.093
A <sub>2</sub>	B <sub>1</sub>	Mean	9.659	9.685	9.785	14.328	14.467	14.850
		Var.	2.505	3.040	2.769	2.039	1.775	1.256
	B <sub>2</sub>	Mean	11.091	10.800	10.875	15.439	15.363	15.498
		Var.	1.055	1.763	1.286	1.103	1.136	.933
A <sub>3</sub>	B <sub>1</sub>	Mean	10.303	10.196	10.090	14.806	14.502	14.528
		Var.	1.236	1.093	.883	1.974	2.378	2.438
	B <sub>2</sub>	Mean	10.709	10.514	10.485	14.890	14.785	14.840
		Var.	1.696	1.780	2.413	1.761	2.240	2.136
A <sub>1</sub>	LSLI	B <sub>1</sub>	Repressors	C <sub>1</sub>	Value rank 1	D <sub>1</sub>	Near position	
A <sub>2</sub>	HSI	B <sub>2</sub>	Sensitizers	C <sub>2</sub>	Value rank 2	D <sub>2</sub>	Far position	
A <sub>3</sub>	LSI			C <sub>3</sub>	Value rank 3			

Table 6

Summary of the Means for the Different Levels of the  
Experimental Variables for Trial One and Mean of Trials

(Entries = square roots of Distance scores)

Self-Ideal Discrepancy	<u>Trial One</u>	<u>Mean</u> of Trials
A <sub>1</sub> (LSLI)	12.493 (2)*	12.603 (2)
A <sub>2</sub> (HSHI)	12.685 (3)	12.651 (3)
A <sub>3</sub> (LSHI)	12.459 (1)	12.554 (1)
Defensive Mode		
B <sub>1</sub> (Repressors)	12.346 (1)	12.382 (1)
B <sub>2</sub> (Sensitizers)	12.690 (2)	12.825 (2)
Combined Effects of Self-Ideal Discrepancy and Defensive Mode		
A <sub>1</sub> B <sub>1</sub> (LSLI-R)	12.524 (4)	12.612 (4)
A <sub>1</sub> B <sub>2</sub> (LSLI-S)	12.462 (3)	12.594 (3)
A <sub>2</sub> B <sub>1</sub> (HSHI-R)	12.210 (1)	12.129 (1)
A <sub>2</sub> B <sub>2</sub> (HSHI-S)	13.161 (6)	13.178 (6)
A <sub>3</sub> B <sub>1</sub> (LSHI-R)	12.304 (2)	12.404 (2)
A <sub>3</sub> B <sub>2</sub> (LSHI-S)	12.614 (5)	12.704 (5)
Position in Value Hierarchy		
C <sub>1</sub> (rank 1)	12.571 (2)	12.623 (2)
C <sub>2</sub> (rank 2)	12.459 (1)	12.560 (1)
C <sub>3</sub> (rank 3)	12.607 (3)	12.627 (3)

\*Numbers in parentheses determine the rank order in terms of apparent closeness to S. Lowest number = closest; highest = farthest away.

Table 7

Summary of Analysis of Variance for Trial One

Source of Variance	<u>df</u>	<u>ms</u>	<u>F</u>
Total	431		
Between <u>Ss</u>	71		
A (Self-Ideal Discrepancy)	2	2.157	.207
B (Defensive Mode)	1	17.218	1.652
A X B	2	9.472	.909
<u>Ss</u> /AB (1)	66	10.419	
Within <u>Ss</u>	360		
C (Position in Hierarchy)	2	.859	2.191
D (Stimulus Distance)	1	2033.765	1976.448**
C X D	2	2.075	4.964**
A X C	4	.225	.574
B X C	2	.362	.923
A X D	2	.646	.628
B X D	1	2.748	2.671
A X C X D	4	.377	.902
B X C X D	2	.622	1.488
A X B X C	4	.906	2.311
A X B X D	2	.338	.328
A X B X C X D	4	.291	.696
<u>Ss</u> X C/AB (2)	132	.392	
<u>Ss</u> X D/AB (3)	66	1.029	
<u>Ss</u> X C X D/AB (4)	132	.418	

\*\*  $p < .01$  level of significance

- (1) error term for A, B, A X B
- (2) error term for C, A X C, B X C, A X B X C
- (3) error term for D, A X D, B X D, A X B X D
- (4) error term for C X D, A X C X D, B X C X D, A X B X C X D



distance was highly significant, but as was mentioned previously, this variable was included for methodological reasons only and had no interpretive significance in terms of its main effect. The only other significant effect using trial one data was the first order interaction between position in value hierarchy and stimulus distance (CXD). This interaction was not interpretable in terms of any of the experimental hypotheses. At the near distance the stimulus representing the least valued area in the value hierarchy was seen as largest (closest), the stimulus representing the most valued area as intermediately sized, and the stimulus representing the intermediate value area as smallest (farthest away). At the far position the most valued stimulus maintained its intermediate position, with the relationship between the intermediately and least valued stimuli being reversed. This interaction was also significant in a separate analysis of variance in which low ideal versus high ideal replaced the three sampled self-ideal discrepancy groups as the different levels of the A variable.. The relationship between the differently valued stimuli at the two distances was the same as that described above.

Table 8 presents the analysis of variance for the mean of the trials with the three sampled self-ideal discrepancy groups treated as qualitatively different categories. Again none of the main effects for the experimental variables (self-ideal discrepancy, defensive mode, and position in value hierarchy) attained statistical

Table 8

Summary of Analysis of Variance for the Mean of Trials

Source of Variance	<u>df</u>	<u>ms</u>	<u>F</u>
Total	431		
Between <u>Ss</u>	71		
A (Self-Ideal Discrepancy)	2	.712	.071
B (Defensive Mode)	1	21.236	2.129
A X B	2	10.789	1.089
<u>Ss</u> /AB (1)	66	9.974	
Within <u>Ss</u>	360		
C (Position in Hierarchy)	2	.202	1.255
D (Stimulus Distance)	1	2139.575	2035.750**
C X D	2	.251	2.221
A X C	4	.400	2.848*
B X C	2	.016	.099
A X D	2	1.354	1.288
B X D	1	4.191	3.988*
A X C X D	4	.106	.938
B X C X D	2	.006	.053
A X B X C	4	.316	1.953
A X B X D	2	.743	.707
A X B X C X D	4	.101	.894
<u>Ss</u> X C/AB (2)	132	.161	
<u>Ss</u> X D/AB (3)	66	1.051	
<u>Ss</u> X C X D/AB (4)	132	.113	

\*\*  $p < .01$  level of significance\*  $p < .05$  level of significance

(1) error term for A, B, A X B

(2) error term for C, A X C, B X C, A X B X C

(3) error term for D, A X D, B X D, A X B X D

(4) error term for C X D, A X C, B X C X D, A X B X C X D

significance. Two interactions were significant, however. One was the first order interaction between self-ideal discrepancy and position in value hierarchy (AXC). As shown in figure 3, this interaction was caused mainly by the divergence of the trend of the low self-high ideal group from the trends of the low self-low ideal and high self-high ideal groups across the three levels of the position in hierarchy variable. Whereas, in moving from the most highly valued stimulus to the least valued stimulus the low self-low ideal and high self-high ideal groups tended to see the stimuli as generally slightly smaller; the low self-high ideal group moving in the same direction tended to see the stimuli as progressively larger. Thus, the two low self-ideal discrepant groups tended to reflect the hypothesized trend that highly valued stimuli would be seen as larger and closer than less highly valued stimuli (with the one exception that in the high self-high ideal group the most valued stimulus was seen as smaller than the intermediately valued stimulus), while the high self-ideal discrepant group tended to reflect the obverse of the hypothesized trend.

The other significant effect, which is expressed in figure 4, was the first order interaction between defensive mode and stimulus distance (BXD). This interaction indicated that although the stimuli were seen as larger and closer by the repressors at both distances, the difference between the two groups was larger at the near distance than at the far. Although the main effect for defensive mode did not attain statistical significance in any of the analyses that were run, there was a consistent relationship

Figure 3

Distance Settings on the First, Second and Third  
Ranked Value Stimuli by the Low Self-Low Ideal,  
High Self-High Ideal and Low Self-High Ideal Groups  
on the Mean of Trials

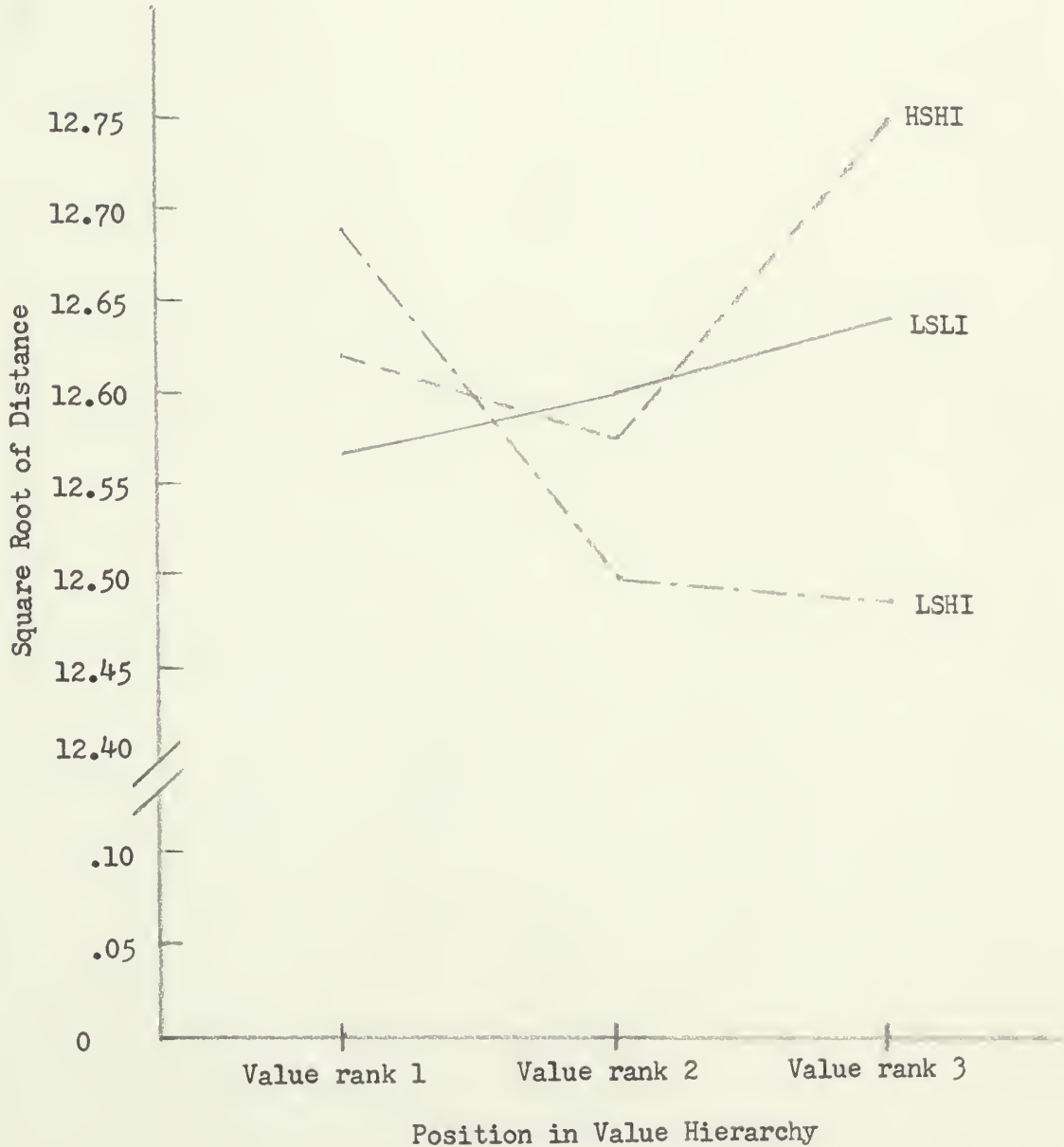
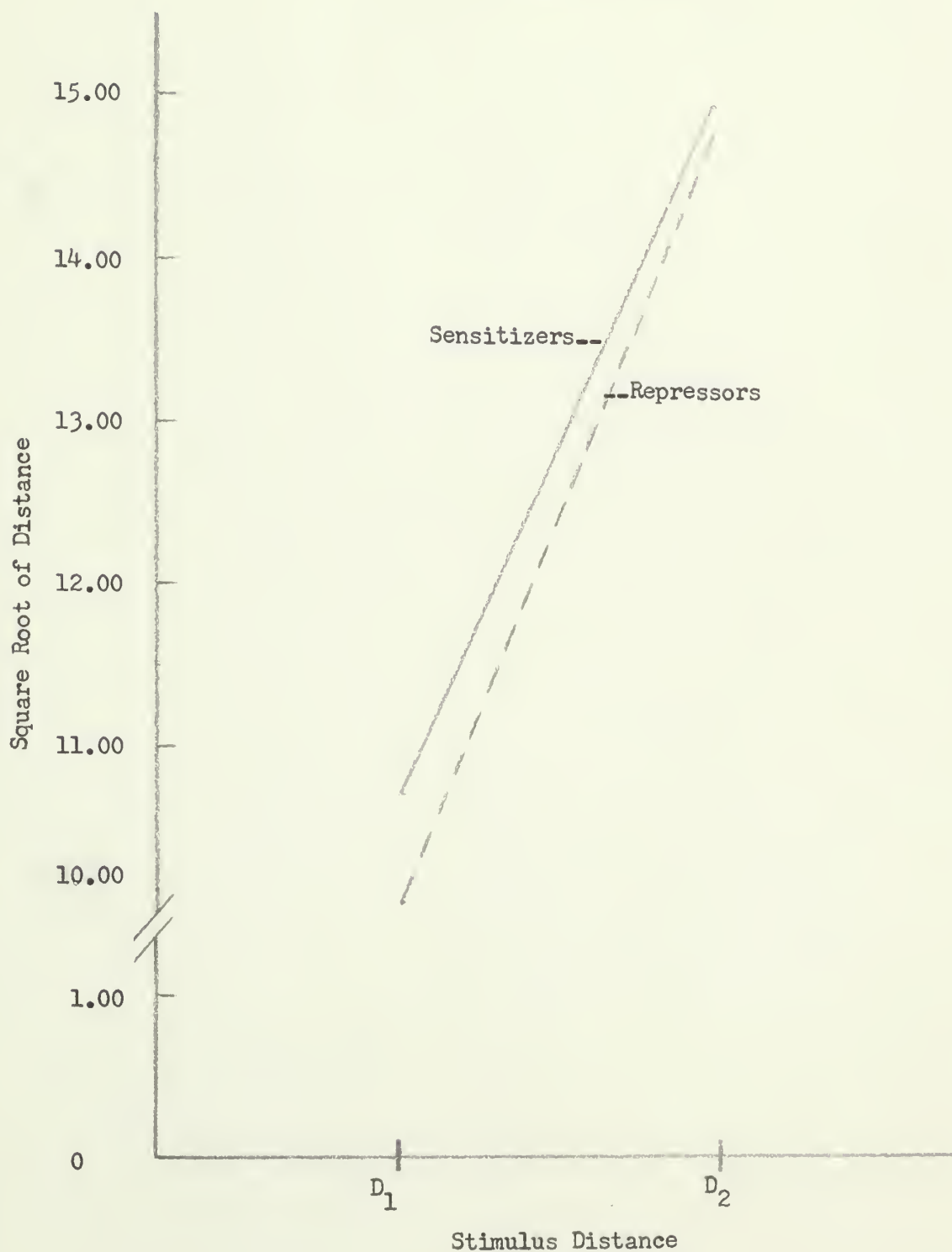




Figure 4

Distance Settings at Near and Far Stimulus Distances  
for Repressors and Sensitizers  
on the Mean of Trials



expressed between the two levels of this variable. This was the tendency, expressed at both stimulus distances in the BXD interaction, for the repressors to see the stimuli as larger and closer than did the sensitizers. For both trial one and the mean of the trials this relationship was consistently expressed in all cells of the total design except for the six cells representing the low self-low ideal repressors and sensitizers at the far stimulus distance. In this one case the repressors tended to see the stimuli as smaller and farther away than did the sensitizers.

As mentioned in the method section, the self-ideal discrepancy groups were selected in such a way that independent analyses of variance of a 2 X 2 split plot design could be run in which the A variable would consist of high and low levels of self and ideal. Two of these analyses were run on the data for trial one. There were no significant effects in the analysis in which the A variable consisted of high and low levels of self. In the other involving high and low levels of ideal, only the previously reported CXD interaction was significant. Since in the two original analyses of trial one and the mean of the trials--in which the A variable consisted of the three qualitatively different self-ideal groups--the Fs for the A variable were so small, no further separate analyses were run (those omitted being comparisons of high and low levels of self and ideal for the mean of the trials).

In analysing the relationships between the means of the various groups both for main effects and their interactions,

information was obtained about the distances (sizes) at which the experimental stimuli were perceived. However, it was also meaningful to obtain information about the variances of the different groups, since this would provide information on the degree of inconsistency of size-distance perception around a particular group's central tendency. Consequently variances were computed on the scores for the Ss in each level of self-ideal discrepancy (as sampled), defensive mode, and the combined effects of these variables. These variances were computed separately for both stimulus positions. Only one F ratio was significant, that being the ratio between the low self-low ideal repressors and the high self-high ideal sensitizers at the far position, with the repressors showing the greater variance. An interesting trend occurred, however. As presented in table 9, the variances for the repressors were greater than those for the sensitizers at both stimulus distances. In addition, this same relationship was maintained in all but one of the cells in the self-ideal discrepancy-defensive mode combination at both stimulus distances, the one exception being that the variance for the low self-high ideal sensitizers was greater than that for the low self-high ideal repressors at the near position.

In terms of the analyses of both means and variances, then, there was a tendency in this experiment for the repressors to perceive the stimuli as larger and closer than did the sensitizers, and also to fluctuate more around their own central tendency than did the sensitizers.



Table 9

Variances for All Levels of Self-Ideal Discrepancy (A),  
 Defensive Mode (B), and the Combination of Both (A X B)  
 For the Near and Far Stimulus Positions  
 on the Mean of the Trials

---

	Near	Far
(A) LSLI	1.52	2.62
HSI	2.22	1.48
LSI	1.39 <u>F</u> max/min=1.59	2.05 <u>F</u> max/min=1.77
(B) Repressors	1.69	2.31
Sensitizers	1.48 <u>F</u> max/min=1.14	1.76 <u>F</u> max/min=1.31
LSLI-R	1.63	3.38
LSLI-S	1.50	1.93
(AXB) HSI-R	2.56	1.63
HSI-S	1.27	1.04
LSI-R	.98	2.23
LSI-S	1.86 <u>F</u> max/min=2.61	2.03 <u>F</u> max/min=3.25*

---

\* Significant at .05 level. Variances for (A) computed on 24 independent scores each; for (B) on 36 independent scores; and for (AXB) on 12 independent scores. Each independent score consisted of the mean of 6 scores--the 3 trial scores and the 3 scores for the different stimuli.

## DISCUSSION

The first experimental hypothesis--concerning the differential effects of low and high levels of self-ideal discrepancy on the size-distance perception of related human images--was not borne out in this study. In none of the analyses were the differences between the means of the three self-ideal discrepancy groups statistically significant. However, the relationship among these means did express the hypothesized trends both for trial one and the mean of the trials. Aside from the possible invalidity of the hypothesis, certain methodological conditions may have contributed to the lack of significance in the data. One was the failure on the part of the E to determine to some degree the validity of the self-ideal discrepancy scores obtained with the questionnaire, quite apart from the validation of value hierarchy scores described previously. Although the self-ideal discrepancy variable has been used in many other researches (Wiley, 1961), it is possible that this particular application of it--assessing it with respect to specific value areas as opposed to general personality adjustment, as is more commonly done--may be in some way inherently untenable. Validity checks in the form of significant correlations with other tests of self-assessment, and also in the form of personal interviews with the preliminary testees may well have indicated sources of weakness in the questionnaire itself.

Another weakness may reside in the manner in which the questionnaire was administered. As described in the method

section, groups of approximately 25 students were given the self-ideal discrepancy questionnaire and the R-S scale in a single sitting. There is the possibility that in the group administration, with little or no establishment of tester-testee rapport, the majority of the students responded to the questionnaire in a mechanical, minimally-introspective way in order to finish and leave the test situation as quickly as possible. Such a mode of response could have seriously sapped the instrument of its functional validity. Rogers (1954), for one, is seemingly free of this difficulty in his particular use of the self-ideal discrepancy variable as an indicator of change in psycho-therapy. Since his testees are simultaneously patients in therapy, he would appear to have much greater opportunity for establishing good rapport with them and thereby enlisting their sensitive, serious introspection in response to his self-ideal discrepancy Q sorts.

These two sources of methodological inadequacy should be borne in mind in any evaluation of this particular manifestation of self-ideal discrepancy as a determinant of perceptual distortion. In light of the extensive literature on both the inner determinants of perception (Allport, 1955) and the self-ideal discrepancy variable (Wiley, 1961), rectification of such methodological weaknesses should be carried out in further studies before the general hypothesis is considered invalid.

The third experimental hypothesis was also not confirmed in the study. This hypothesis predicted that for all Ss the stimuli



representing more highly valued areas would be seen as larger and closer than the stimuli representing less highly valued areas. In addition, this tendency was expected to be more extreme in the high self-ideal discrepancy groups than in the low. As stated previously, the rationale for this hypothesis comes from the extensive body of research summarized by Allport (1955) which points to a relationship between differential object value and differential size estimation, with more highly valued objects generally receiving larger size estimates. Although none of the studies cited used humans (or human images) as stimuli, there seemed to be no reason why such stimuli, on the basis of different associated value-meanings, would not be subject to similar perceptual distortions. Again, the lack of confirmatory data may in part be attributed to conditions of this particular study. There is the possibility that the three stimuli as presented were not, in general, valued differently--at least not enough to mediate measurable perceptual differences. Even though people may tend to emphasize any one of the intellectual, social or physical value areas in their daily lives, it is quite likely, due to the importance of all three value areas in this culture, that all of the stimuli were rather similarly cathected by the majority of the Ss. In light of the pervasive cultural press toward overall self-perfection this becomes even more credible. Without a sufficient gradient of object value, then, it is not difficult to understand the lack of a parallel response gradient in terms of differential size estimates of the stimuli.

In a subsequent study, a steeper and more meaningful gradient of object value might be obtained by presenting similar stimuli differentially described as superior, average and inferior achievers. In such an arrangement, characteristics from each of the three distinct value areas might be included in each of the descriptions so that each of the three stimuli would reflect different levels of a more general achievement. Post-experimental comments from a number of the Ss suggested that the descriptive paragraphs reflected achievements that were too specialized, and that combinations of qualities from the three value areas would have been more realistic.

At this point in the discussion a suggestion concerning an improvement of the Thereness-Thatness apparatus, as regards its use with human images, is appropriate. By the proper use of mirrors in the stimulus field, it seems possible that actual human beings, positioned to the right of the stimulus field, could be presented as experimental stimuli. Real humans talking, grimacing and interacting with the Ss would seemingly increase the reality of this kind of study. Perhaps this improvement, along with those suggested for the self-ideal discrepancy questionnaire and the experimental stimuli as they stood, might further enhance the various non-significant trends observed in this study.

The significant interaction between self-ideal discrepancy and position in value hierarchy (AXC) for the mean of the trials is difficult to interpret. As mentioned previously, the main effect for self-ideal discrepancy, though lacking statistical

significance, did express the hypothesized relationship among the group means. That is, that the high self-ideal discrepant Ss (low self-high ideal) would see the stimuli as larger and closer than would the low self-ideal discrepant Ss (low self-low ideal, high self-high ideal). In the interaction in question this relationship was switched for the highest valued stimulus but not for the intermediately and lowest valued stimuli. This single stimulus was seen as smaller and farther away by the high self-ideal discrepant Ss than by the other Ss. Since the main effect for position in value hierarchy was non-significant, one might dismiss the switch in relationship at the highest valued stimulus as a chance phenomenon. This alternative gains strength if one seriously considers the above discussion concerning the lack of differential value cathexis of the experimental stimuli.

On the other hand the switch at the most highly valued stimulus might be interpreted otherwise. It may be that in facing this stimulus the high self-ideal discrepant Ss consciously or unconsciously responded with a primitive protection mechanism; one which served the purpose of putting distance between themselves and the stimulus. Because of their relatively low self-esteem, which is implied in the condition of high self-ideal discrepancy, these Ss may have felt particularly uncomfortable in this situation--especially if the most highly valued area in the value hierarchy is emphasized in one's daily life. Analogous tendencies are seen in the behavior of schizophrenics



who are generally considered to be extremely low in self-esteem (Fromm-Reichmann, 1959; Sullivan, 1961), and who are also commonly characterized by marked social withdrawal. For instance, Sommers (1959) reported that in a study involving verbal communication while seated at a table, schizophrenics tended to put greater distance between one another than did non-schizophrenic patients and normals. They also demonstrated evasive behaviors such as looking away from their partner and wandering aimlessly away from their seats. Although this does not point to any basic connection between high self-ideal discrepancy and manifest or latent schizophrenia, it does suggest possible parallels between the two, both in terms of low levels of self-esteem and "distancing" techniques in interpersonal situations.

Though not statistically significant at .05 level, the results produced by the defensive mode variable (Hypothesis 2) were of interest. As summarized in the previous section, the repressors consistently perceived all stimuli as larger and closer than did the sensitizers. Also, in the combined effect for self-ideal discrepancy and defensive mode this same general trend prevailed. That is, the repressing groups tended to perceive the stimuli as larger and closer than did the sensitizing groups. In addition, as revealed by inspection of the relationships among the variances, the repressors tended to fluctuate more about their own central tendency than did the sensitizers.

With regard to the relationships among the means, these results ran counter to the hypothesized trends. On the basis of



findings by Altrocchi et. al. (1960), which demonstrate a correlation between high self-ideal discrepancy and sensitizing tendencies, the sensitizers were expected to perceive the stimuli as larger and closer than were the repressors. In the combined effect for the self-ideal discrepancy and defensive mode variables the high self-ideal discrepant sensitizers were expected to perceive the stimuli as largest and closest, and the low self-ideal discrepant repressors as smallest and farthest away--no particular relationship being hypothesized for the other two groups.

The factor of suggestibility might be used to throw some light on these results. Since the Ss' responses to the visual stimuli were purportedly influenced by the verbal descriptions accompanying them, differential suggestibility, or "influencibility", among the Ss might have served to mediate differential object cathexes and thus differential size estimates of the stimuli. The clinical literature has long expressed an intimate relationship between the syndrome hysteria and the characteristic of hyper-suggestibility (Stukat, 1958, p. 130). In addition, the psychoanalytic literature points to an equally intimate relationship between hysteria and repression, repression being the principal ego-defense mechanism of the hysterical type of personality (Fenichel, 1945). By continuing this line of reasoning, it would not be illogical to infer that the repressors in this study were relatively more "suggestible" than the sensitizers, and thus predisposed to larger size estimates of the stimuli in connection with the descriptive paragraphs supplied by E. Reference

to the clinical correlates of sensitizing tendencies would seem to strengthen this idea. These tendencies supposedly correlate with the intellectualive, ruminating, doubting traits of people who employ obsessive-compulsive defenses (Altrocchi et. al., 1960). Where one might visualize the repressors responding with unreflective compliance to E's descriptions, the sensitizers might be imagined to have immediately responded with doubt and restraint, as if to say, "I'll have to see more of him".

Controlled experiments in this area have produced conflicting results, however. Although Eysenk (1947) found neurotics to be more suggestible than normals, he did not find a significant difference in the suggestibility of hysterics as compared to non-hysterics. In fact, he found the mean suggestibility score of the dysthymics (correlative to obsessive-compulsive) to be slightly higher than that for the hysterics. Stukat (1958), in a most comprehensive study of suggestibility, produced results that are partly in agreement and partly in conflict with Eysenck's findings. He, too, found that neurotics show more secondary (ideational) suggestibility than do normals, and that hysterics are not more inclined toward secondary suggestibility than non-hysterics. However, in a further series of studies relating suggestibility to such factors as need for conformity and situational expectations, he found that young individuals, women, neurotics and anxious personalities--those showing greater need for conformity--showed greater tendencies to secondary suggestibility. At least the young and female characteristics can be

linked conceptually with repression tendencies. According to Shafer (1954), the type of person who relies heavily on repressive defenses can be expected to exhibit immaturity, emotional lability, naivete and general restriction of creative and intellectual processes. That hysteria (emphasizing repressive defenses) is more common among women than men is a well known clinical fact.

The results of the study by Kaufer (1961) mentioned in the introduction might also be linked with the results obtained here. Using the Thereness-Thatness situation, Kaufer found that the "moving-towards" subjects tended to perceive representations of human figures as larger and closer than the "moving-away" subjects. According to Horney's trichotomous classification of interpersonal orientations, the "moving-toward" type of personality is principally dependent, compliant and excessively needful of the love, support and affection of others, while the "moving-away" type tends toward social withdrawal and aloofness. The characteristics of the "moving-toward" type seem in their dependent aspects to be similar to those described by Schafer in connection with excessive use of repressive defenses.

Although these results are equivocal, an explanation can be offered for the tendency of the repressors to see the stimuli as larger and closer than did the sensitizers. This is based on the assumption, admittedly tenuous, that the repressors tended to be more suggestible than the sensitizers, and thus tended to be more influenced by the descriptive paragraphs accompanying the stimuli. Since these paragraphs depicted characteristics that are generally



valued in this culture, it is further assumed that the relatively greater suggestibility of the repressors tended to mediate, or contribute to, greater size estimates of the experimental stimuli.

One could just as well emphasize the hypo-suggestibility or "criticalness" of the sensitizers in this explanation, especially since the perceptual tendencies of the two groups were evaluated in relation to one another. (In absolute terms, both groups perceived the stimuli as being smaller and farther away than they actually were, this tendency apparently being due to some artifact in the apparatus.) Taking this into consideration, it is possible to speculate further on the connection between these perceptual tendencies and the inferred defensive techniques of the two groups. Perhaps the tendency to perceive relatively "uncritically" contributes to, or even necessitates, the use of the cruder avoidant and denial techniques that are basic to the repressing defense. That is, percepts of a threatening nature may achieve excessive emotional impact before they are dealt with by the blanket-like avoidances and denials used by repressing types (hysterics). On the other hand, the "critical" attitude of the sensitizing type may help to initially attenuate the threat-value of the percept and thus allow the ego greater latitude for further intellectual processing of the incoming information.

The significant interaction between defensive mode and stimulus distance (BXD) expressed the same relationship between the repressors and sensitizers at both stimulus distances--the



repressors perceiving the stimuli as larger and closer. The interaction was caused by the decrease in difference between the two groups at the far position relative to the near. This decrease may be an artifact of the square root transformation that was performed on the data in order to approximate homogeneity of variance at the two stimulus positions. On the other hand, we may speculate that the stimuli at the far position were sufficiently reduced in degree of threat so that the divergent defensive modes of the two groups were less necessary at this position. As a result, the perceptual differences due to these modes was reduced. This interpretation would be consistent with the "distancing" mechanism mentioned above in connection with the interpretation of the AXC interaction.

The tendency of the repressors to fluctuate more about their own mean, as expressed in the variance data, also seems to fit with the personality characteristics that have been connected with repressing defenses; i.e., immaturity, naivete, emotional lability and curtailment of intellectual development.

In summary, then, none of the hypotheses for main effects were statistically confirmed. However, with respect to self-ideal discrepancy, the means for the different groups were arranged according to the hypothesized trends on both trial one and the mean of the trials. Certain methodological weaknesses were considered in connection with the failure to obtain statistical significance with this variable. The main effect for defensive mode also showed a consistent trend throughout the experiment.

This was the tendency for the repressors to perceive the stimuli as larger and closer than did the sensitizers. A tentative explanation for this phenomenon in terms of the greater relative suggestibility of the repressors was offered. Another consistent, though statistically non-significant, trend was the tendency for the repressors to fluctuate more (show greater variance) about their own central tendency. This was also tentatively explained in terms of personality factors which correlate with repressive defenses and hyper-suggestibility.

In addition to these non-significant trends, three first order interactions did attain significance. The interaction between position in value hierarchy and stimulus distance (CXD), which was significant on trial one, was not interpretable in terms of any of the experimental hypotheses. The interaction between self-ideal discrepancy and position in value hierarchy (AXC), which was significant on the mean of the trials, and which was due mainly to the divergence of the low self-high ideal Ss from the expected trend, was tentatively interpreted in two ways. On the one hand, it could be regarded as a chance phenomenon; on the other hand, it might be seen, contrary to prior expectations, as reflecting the operation in the low self-high ideal Ss of a schizophrenic-like "distancing" response in an uncomfortable situation. Finally, the interaction between defensive mode and stimulus distance (BXD) was significant on the mean of the trials. This effect, which was caused by the decrease in difference between the sensitizers and the repressors

at the far position relative to the near, also seemed open to two interpretations. One alternative was to regard it as an artifact of the square root transformation which was applied to the data; the other attributed the decrease in divergent defensive tendencies of the two groups to the reduced threat qualities of the stimuli at the far position.

Perspective--This study was undertaken in order to investigate the effects on perceptual behavior of a particular kind of mental constellation; i.e., degree of self-ideal discrepancy. Although the results were not statistically significant, they do suggest some interesting theoretical implications. It is possible, as suggested by the trend among the means of the self-ideal discrepancy groups, that increasing degrees of this discrepancy do contribute to overestimations of the size of certain relevant objects. If this were statistically confirmed in further methodologically superior experiments, it would be a valuable contribution to the existing literature on the inner determinants of perception (Allport, 1955), and also a possible source of insight into the social behaviors of various groups of people who can be thought of as having this or related conditions. For instance, the "distancing" techniques of the above mentioned schizophrenics patients (Sommers, 1959), might be better understood in terms of the tendency of these patients to perceptually overestimate the sizes of other people in their environments. Such perceptual distortions might serve to mediate excessive feelings of fear and inadequacy and thus contribute to the social



withdrawal of these patients. This would be consistent with the apparent "distancing" behavior of the high self-ideal discrepant Ss in response to the most highly valued stimulus in the AXC interaction, the interpretation offered here being that the most highly valued stimulus may have been initially perceived as largest and closest by these Ss, but then consciously or unconsciously "distanced" due to emotional discomfort.

Experimental validation of this hypothesis might also throw light on the relationship between self-evaluation and levels of aspiration in less seriously stricken people. For example, Snygg and Combs (1948) maintain that the goals that people set are related to the concepts they hold of themselves, and that people who value themselves highly will strive for high goals, while people who have low opinions of themselves will be content with mediocre attainments. It is possible in the latter type--who seem more similar to high self-ideal discrepant people--that the leaning toward mediocre goals is in part mediated by the tendency to overestimate the sizes, and other relevant characteristics, of the persons and objects with whom they must interact in pursuit of their goals. These distortions may then predispose the persons with low self-evaluations to feeling of weakness and inadequacy, and thus into acceptance of mediocre attainments. In one sense this "partial withdrawal" can be seen as a less severe manifestation of the more total schizophrenic withdrawal. Perhaps the social withdrawal of schizophrenics, the "partial withdrawals" from the competitive sphere of persons with low self-regard, and



the apparent "distancing" response of the high self-ideal discrepant Ss in the AXC interaction of this study are (were) all mediated, to some extent, by the same perceptual mechanism.

The trend expressed by the defensive mode variable also suggests an interesting research problem. In a recent study using a tachistoscope and threatening (failure related) stimuli, Tempone (1961) found that repressors exhibited higher recognition thresholds than did sensitizers. This finding is in accord with the findings of older studies relating perceptual (recognition) thresholds for threatening stimuli to differential ego-defensive modes analogous to the present repression-sensitization dichotomy (Lazarus, Eriksen and Fonda, 1951; Eriksen, 1952). With the Thereness-Thatness apparatus it is possible to obtain a different kind of perceptual data from Ss screened along the repression-sensitization dimension. Information on the size-distance perception of expressly threatening stimuli by such Ss would throw further light on perceptual characteristics of sensitizers and repressors, and might also clarify their tendencies to show differential recognition thresholds in the tachistoscopic situation.

## SUMMARY

The purpose of this study was to explore the effects of different levels of self-ideal discrepancy on the size-distance perception of human images relevant to the discrepancy. Two different ego-defensive modes were also studied for their effects, both individually and in combination with the different levels of self-ideal discrepancy, on the perceptual behavior in question.

The Ss were undergraduate males at the University of Massachusetts. A total of 194 Ss were given a self-ideal discrepancy questionnaire based upon intellectual, social and physical characteristics, and a scale consisting of 156 MMPI items which measured their ego-defensive tendencies in terms of sensitization or repression. Seventy two Ss were selected for the perceptual task on the Thereness-Thatness apparatus. These Ss formed six groups (12 per group) which represented all combinations of the three qualitatively different self-ideal discrepancy categories (low self-high ideal, high self-ideal discrepant; low self-low ideal, low self-ideal discrepant; high self-high ideal, low self-ideal discrepant) and the two ego-defensive modes (repression vs. sensitization).

In the perceptual task the stimuli were three full face, life-sized photographs of college aged males. Each one was verbally depicted as a superior achiever in one of three culturally valued achievement categories: intellectual, social and physical. Thus, the same three value categories were represented both in

the self-ideal discrepancy questionnaire and the experimental stimulus complex (faces plus verbal descriptions). Each S made three size-distance judgments on each stimulus at each of two distances in a modified Ames Thereness-Thatness apparatus for a total of 18 size-distance judgments per S (3 trials X 3 stimuli X 2 stimulus distances = 18 size-distance judgments).

None of the hypotheses for main effects were statistically confirmed. The means of the three self-ideal discrepancy groups did, however, reflect the hypothesized trend that the high self-ideal discrepant Ss would perceive the stimuli as larger and closer than would the low self-ideal discrepant Ss. The main effect for defensive mode also showed a consistent tendency for the repressors to perceive the stimuli as larger and closer than the sensitizers, and also to fluctuate more about their own central tendency than did the sensitizers. These latter two trends pertaining to defensive mode were tentatively explained in terms of the greater suggestibility and lability of the repressors as compared to the sensitizers. A tendency for the low self-high ideal group to see the highest valued stimulus as smallest and furthest away, rather than largest and closest as was expected, was interpreted as a possible schizophrenic-like "distancing" response in an emotionally uncomfortable situation. Finally, a decrease in the difference between the repressors and the sensitizers at the far stimulus position relative to the near was tentatively explained as a result of the reduced threat quality of the stimuli at the far position.

Methodological criticisms with respect to the self-ideal discrepancy questionnaire, the Thereness-Thatness apparatus, and the experimental stimuli were offered. Theoretical implications and some possible extensions of this study were also discussed.



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Self-Ideal Discrepancy Questionnaire--Part A

1. I am intelligent.
2. I make strong demands on myself.
3. I am often left out of group social activities.
4. I am a competitive person.
5. I am good at abstract reasoning.
6. I have good linguistic and mathematical abilities.
7. I don't care much for reading.
8. I have plenty of energy for strenuous physical activity.
9. I am an aloof reserved person.
10. I get along well with most people I meet.
11. I am a disciplined thinker.
12. It's difficult to control my aggression.
13. I am a social leader.
14. I am a good athlete.
15. I conduct myself smoothly at social functions such as dinner parties, dances, dates, etc.
16. I express my emotions freely.
17. I am not interested in intellectual pursuits.
18. Most people like me.
19. I am good looking.
20. I am critical of people.
21. I am shy.
22. Clothes look well on me.
23. I have an underlying feeling that I'm not contributing enough to life.
24. I am at ease with new acquaintances.
25. I am confident about my physical appearance in social gatherings.
26. I often feel guilty.

## PART A

27. I am especially interested in improving my mind.
28. I don't trust my emotions.
29. I feel tense and awkward at social gatherings.
30. I am very interested in learning about the ideas of the world's great thinkers.
31. I tire easily.
32. I have good manners.
33. I have an unattractive physique.
34. I am a rational person.
35. I feel uncomfortable with new acquaintances.
36. I am tolerant.
37. I can concentrate for long periods of time on a complex problem.
38. I am a popular person.
39. I am poorly coordinated physically.
40. I feel inferior.
41. I am well coordinated, and have always performed well at such physical activities as dancing or general athletics.
42. I do not find it difficult to interact with other people.
43. I have initiative.
44. I am a deep thinker.
45. I am assertive.
46. I have good physical stamina.
47. I often feel lonely.
48. I am satisfied with myself.
49. I am well read.
50. I have a strong physique.
51. I am a poor athlete.
52. My ability to concentrate is poor.

## PART A

53. I feel relaxed and nothing really bothers me.
54. I fit easily into different kinds of social activities and am rarely at a loss for company.
55. I am not particularly good looking.
56. Theoretical problems tend to confuse and bore me.
57. I often feel aggressive.
58. I am different from others.
59. I am not an intellectual person.
60. My height and my weight are just about right.



1. I am intelligent.
  2. I have plenty of energy for strenuous physical activity.
  3. I get along well with most people I meet.
- 

4. My height and weight are just about right.
  5. I have good linguistic and mathematical abilities.
  6. I am a social leader.
- 

7. I am a disciplined thinker.
  8. I conduct myself well at social functions such as dinner parties, dances, dates, etc.
  9. I am a good athlete.
- 

10. Most people like me.
  11. I am good looking.
  12. I am especially interested in improving my mind.
- 

13. Clothes look well on me.
  14. I am very interested in learning about the ideas of the world's great thinkers.
  15. I am at ease with new acquaintances.
- 

16. I am confident about my appearance in social gatherings.
  17. I am well read.
  18. I have good manners.
- 

19. I have a strong physique.
  20. I fit easily into different kinds of social activities and rarely am at a loss for company.
  21. I am a deep thinker.
- 

22. I do not find it difficult to interact with other people.
  23. I have good physical stamina.
  24. I am good at abstract reasoning.
- 

25. I am well coordinated, and have always performed well at such physical activities as dancing or general athletics.
26. I can concentrate for long periods of time on a complex problem.
27. I am a popular person.

1Instructions for Actual Self

In evaluating the statements the first time, you should continually bear in mind your ACTUAL SELF. This refers to yourself as you feel you actually are. In reading each statement repeat to yourself the thought: "As I see myself now..." With this thought continually in mind, rank each statement as to how much it applies to your actual self by assigning to it the appropriate number.

Numbers and their Designations:

1. applies hardly at all.
  2. applies a little.
  3. applies moderately.
  4. applies a good deal.
  5. applies very much.
- 

	ACTUAL SELF		"As I see myself now..."
1.	16.	31.	46.
2.	17.	32.	47.
3.	18.	33.	48.
4.	19.	34.	49.
5.	20.	35.	50.
6.	21.	36.	51.
7.	22.	37.	52.
	ACTUAL SELF		"As I see myself now..."
8.	23.	38.	53.
9.	24.	39.	54.
10.	25.	40.	55.
11.	26.	41.	56.
12.	27.	42.	57.
13.	28.	43.	58.
14.	29.	44.	59.
15.	30.	45.	60.

## ANSWER SHEET (PART A)

2Instructions for Ideal Self-Concept

In evaluating the statements the second time, you should continually bear in mind your IDEAL SELF-CONCEPT. This refers to yourself as you would like to be. In reading each statement repeat to yourself the thought: "Ideally, I wish I could honestly say..." With this thought continually in mind, rank each statement as to how much it applies to your ideal self-concept by assigning to it the appropriate number.

Numbers and their Designations

1. applies hardly at all.
2. applies a little.
3. applies moderately.
4. applies a good deal.
5. applies very much.

---

IDEAL SELF-CONCEPT		"Ideally I wish I could honestly say..."	
1.	16.	31.	46.
2.	17.	32.	47.
3.	18.	33.	48.
4.	19.	34.	49.
5.	20.	35.	50.
6.	21.	36.	51.
7.	22.	37.	52.

IDEAL SELF-CONCEPT		"Ideally I wish I could honestly say..."	
8.	23.	38.	53.
9.	24.	39.	54.
10.	25.	40.	55.
11.	26.	41.	56.
12.	27.	42.	57.
13.	28.	43.	58.
14.	29.	44.	59.
15.	30.	45.	60.

## ANSWER SHEET (PART B)

3

Instructions for Value Hierarchy

On this part of the answer sheet, when evaluating the "trios" of statements, you should continually bear in mind your IDEAL SELF-CONCEPT. The thought, "Ideally I wish I could honestly say...", should help you here also. Remember, in each "trio" the statement applying most to your Ideal Self-Concept gets a 1, the statement applying second best gets a 2, and the one applying least gets a 3.

---

IDEAL SELF-CONCEPT	"Ideally I wish I could honestly say...."
1.	16.
2.	17.
3.	18.
_____	_____
4.	19.
5.	20.
6.	21.
_____	_____
7.	22.
8.	23.
9.	24.
_____	_____
10.	25.
11.	26.
12.	27.
_____	_____
13.	
14.	
15.	
_____	



R-S Scale

1. I have a good appetite.
2. I wake up fresh and rested most mornings.
3. I am easily awakened by noise.
4. I like to read newspaper articles on crime.
5. My daily life is full of things that keep me interested.
6. I am about as able to work as I ever was.
7. There seems to be a lump in my throat much of the time.
8. I enjoy detective or mystery stories.
9. Once in a while I think of things too bad to talk about.
10. I am very seldom troubled by constipation.
11. At times I have fits of laughing and crying that I cannot control.
12. I feel that it is certainly best to keep my mouth shut when I'm in trouble.
13. I find it hard to keep my mind on a task or job.
14. I seldom worry about my health.
15. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going."
16. My sleep is fitful and disturbed.
17. I do not always tell the truth.
18. My judgment is better than it ever was.
19. I am in just as good physical health as most of my friends.
20. I prefer to pass by school friends, or people I know but have not seen for a long time, unless they speak to me first.
21. I am a good mixer.
22. Everything is turning out just like the prophets of the Bible said it would.
23. I do not read every editorial in the newspaper every day.

24. I sometimes keep on at a thing until others lose their patience with me.
25. I wish I could be as happy as others seem to be.
26. I think a great many people exaggerate their misfortunes in order to gain the sympathy and help of others.
27. I get angry sometimes.
28. Most of the time I feel blue.
29. I sometimes tease animals.
30. I am certainly lacking in self-confidence.
31. I usually feel that life is worth while.
32. Once in a while I put off until tomorrow what I ought to do today.
33. I think most people would lie to get ahead.
34. I do many things which I regret afterwards (I regret things more or more often than others seem to).
35. I go to church almost every week.
36. I have very few quarrels with members of my family.
37. I believe in the second coming of Christ.
38. My hardest battles are with myself.
39. I don't seem to care what happens to me.
40. Sometimes when I am not feeling well I am cross.
41. Much of the time I feel as if I have done something wrong or evil.
42. I am happy most of the time.
43. Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.
44. My table manners are not quite as good at home as when I am out in company.
45. I seem to be about as capable and smart as most others around me.
46. Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.
47. Often I can't understand why I have been so cross and grouchy.

48. I have never vomited blood or coughed up blood.
49. I do not worry about catching diseases.
50. At times my thoughts have raced ahead faster than I could speak them.
51. If I could get into a movie without paying and be sure I was not seen I would probably do it.
52. I commonly wonder what hidden reason another person may have for doing something nice for me.
53. Criticism or scolding hurts me terribly.
54. My conduct is largely controlled by the customs of those about me.
55. I certainly feel useless at times.
56. At times I feel like picking a fist fight with someone.
57. I have often lost out on things because I couldn't make up my mind soon enough.
58. It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.
59. I would rather win than lose in a game.
60. Most nights I go to sleep without thoughts or ideas bothering me.
61. During the past few years I have been well most of the time.
62. I have never had a fit or convulsion.
63. I am neither gaining nor losing weight.
64. I cry easily.
65. I cannot understand what I read as well as I used to.
66. I resent having anyone take me in so cleverly that I have had to admit that it was one on me.
67. I like to study and read about things that I am working at.
68. I like to know some important people because it makes me feel important.
69. What others think of me does not bother me.
70. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.

71. I frequently have to fight against showing that I am bashful.
72. My memory seems to be all right.
72. I find it hard to make talk when I meet new people.
74. I am afraid of losing my mind.
75. I am against giving money to beggars.
76. I feel weak all over much of the time.
77. Sometimes, when embarrassed, I break out in a sweat which annoys me greatly.
78. I do not have spells of hay fever or asthma.
79. I do not like everyone I know.
80. I wish I were not so shy.
81. I enjoy many different kinds of play and recreation.
82. I like to flirt.
83. In walking I am very careful to step over sidewalk cracks.
84. I frequently find myself worrying about something.
85. I gossip a little at times.
86. I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.
87. I get mad easily and then get over it soon.
88. I brood a great deal.
89. I have periods of such great restlessness that I cannot sit long in a chair.
90. I dream frequently about things that are best kept to myself.
91. I believe I am no more nervous than most others.
92. Sometimes without any reason or even when things are going wrong I feel excitedly happy, "on top of the world."
93. I can be friendly with people who do things which I consider wrong.
94. Sometimes at elections I vote for men about whom I know very little.



95. I have difficulty in starting to do things.
96. I sweat very easily even on cool days.
97. It is safer to trust nobody.
98. Once a week or oftener I become very excited.
99. When in a group of people I have trouble thinking of the right things to talk about.
100. When I leave home I do not worry about whether the door is locked and the windows closed.
101. I do not blame a person for taking advantage of someone who lays himself open to it.
102. I have often felt that strangers were looking at me critically.
103. I drink an unusually large amount of water every day.
104. I am troubled by attacks of nausea and vomiting.
105. I am always disgusted with the law when a criminal is freed through the arguments of a smart lawyer.
106. I work under a great deal of tension.
107. I am likely not to speak to people until they speak to me.
108. Life is a strain for me much of the time.
109. In school I found it very hard to talk before the class.
110. Even when I am with people I feel lonely much of the time.
111. I think nearly anyone would tell a lie to keep out of trouble.
112. I am easily embarrassed.
113. I worry over money and business.
114. I almost never dream.
115. I easily become impatient with people.
116. I feel anxiety about something or someone almost all the time.
117. Sometimes I become so excited that I find it hard to get to sleep.
118. I forget right away what people say to me.
119. I usually have to stop and think before I act even in trifling matters.

120. Often I cross the street in order not to meet someone I see.
121. I often feel as if things were not real.
122. I have a habit of counting things that are not important such as bulbs on electric signs, and so forth.
123. I have strange and peculiar thoughts.
124. I get anxious and upset when I have to make a short trip away from home.
125. I have been afraid of things or people that I knew could not hurt me.
126. I have no dread of going into a room by myself where other people have already gathered and are talking.
127. I have more trouble concentrating than others seem to have.
128. I have several times given up doing a thing because I thought too little of my ability.
129. Bad words, often terrible words, come into my mind and I cannot get rid of them.
130. Sometimes some unimportant thought will run through my mind and bother me for days.
131. Almost every day something happens to frighten me.
132. I am inclined to take things hard.
133. I am more sensitive than most other people.
134. At periods my mind seems to work more slowly than usual.
135. I very seldom have spells of the blues.
136. I wish I could get over worrying about things I have said that may have injured other people's feelings.
137. People often disappoint me.
138. I feel unable to tell anyone all about myself.
139. My plans have frequently seemed so full of difficulties that I have had to give them up.
140. Often, even though everything is going fine for me, I feel that I don't care about anything.
141. I have sometimes felt that difficulties were piling up so high that I could not overcome them.

142. I often think, "I wish I were a child again."
143. I have often met people who were supposed to be experts who were no better than I.
144. It makes me feel like a failure when I hear of the success of someone I know well.
145. I am apt to take disappointments so keenly that I can't put them out of my mind.
146. At times I think I am no good at all.
147. I worry quite a bit over possible misfortunes.
148. I am apt to pass up something I want to do because others feel that I am not going about it in the right way.
149. I find it hard to set aside a task that I have undertaken, even for a short time.
150. I have several times had a change of heart about my life work.
151. I must admit that I have at times been worried beyond reason over something that really did not matter.
152. I like to let people know where I stand on things.
153. I have a daydream life about which I do not tell other people.
154. I have often felt guilty because I have pretended to feel more sorry about something than I really was.
155. I feel tired a good deal of the time.
156. I sometimes feel that I am about to go to pieces.

General Instructions

This is an experiment in social perception. I am studying how people see various other types of people. In the experiment you will see the faces of three people who differ markedly in their interests and abilities. They are seniors from a neighboring college, and they recently appeared in their college newspaper which runs articles from time to time on outstanding students. I am interested in an aspect of your visual perception of them.

On successive trials these faces will be flashed in front of you in the apparatus. Your job on each trial will be to estimate the distance of the face by moving the white marker. You can move the marker by turning the crank on your left. Specifically, the procedure will be as follows. First, place your head in the head-rest and raise the shield with your right hand. When I say "ready" drop the shield and wait. After a short period of time I will flash one of the faces in front of you for 4 seconds. When I say "set" move the marker to where the face seemed to be. When you have made your setting say "OK" to let me know you are done; then raise the shield and wait for the next "ready" signal. There will be 18 trials with the faces. First, however, we will do a few practice trials with the joker from a deck of playing cards.

After Practice Trials

On the following trials, before I give you the ready signal, I will mention some of the highlights of the newspaper article which appeared about the student, giving you an idea of what he is like. Keep his characteristics in mind as you view his face and make your setting. Think of it as if you were actually seeing him in a darkened room. On successive trials I will briefly remind you of what the person is like. Any questions?



## APPENDIX D

Descriptive Paragraph for Intellectual Value Area

1. D. S. is one of the top students in his class. He has maintained this position through out his college career. Although he is managing editor of his campus newspaper and writes for the campus literary magazine, he maintains a 3.7 Q. P. A. He is doing a senior honors thesis this year, and next year he is going on to graduate school to study for his doctor's degree. On the basis of his academic achievement he has been awarded a scholarship by the government to pay for his graduate training. He is also a member of Phi Beta Kappa the national honor society. D. S. is an exceptional scholar and undoubtedly has a bright professional future.
2. Now here's D. S. again, one of the top scholars in his class.
3. Here's D. S., the fellow with the 3.7 Q.P.A.
4. Here's D. S., he's the fellow who's doing the senior honors thesis.
5. Here's D. S. again, he's the fellow who's won a government scholarship to study for his Ph.D.
6. Here's D. S. again, the Phi Beta Kappa scholar.

Descriptive Paragraph for Social Value Area

1. N. R. is one of the most popular people on his campus. He immediately impresses one with his easy warmth and social poise. He is president of the senior class, and he also held the office of vice-president of his freshman class. He is a member of the intrafraternity council on his campus, and he was largely responsible for the planning and success of his college's recent homecoming weekend. He has been selected to appear in this year's edition of Who's Who in American Colleges. Working with people is his main interest, and next year he plans to go with General Motors as a trainee in personnel management. Through out his college career N. R. has been an outstanding organizer and student leader.
2. Here's N. R. again, the fellow with the easy warmth and social poise.
3. This is N. R., the president of his senior class.
4. Here's N. R., the fellow who represents his fraternity on the intra-fraternity council.
5. Now you'll see N. R. again, the fellow who's been selected to appear in Who's Who in American Colleges.
6. Here's N. R., the outstanding organizer and social leader.

Descriptive Paragraph for Physical Value Area

1. L. W. is the outstanding athlete of his class. He plays varsity football and baseball and also runs for the winter track squad. Last year he led his football team in scoring, and this year he has given signs of repeating this performance by scoring three touchdowns in the opening game of the season. In addition to these varsity athletics L. W. is also an accomplished swimmer and tennis player. He is also cadet colonel of the Air Force ROTC on his campus. After graduation he intends to enter the Air Force and become a career officer. He has been accepted for jet-pilot training.
2. Now here's L. W., the outstanding athlete.
3. Here's L. W. again, the fellow who plays varsity football and baseball.
4. Here's L. W., the fellow who scored three touchdowns in the opening game of the season.
5. Here's L. W. again, the accomplished swimmer and tennis player.
6. This is L. W. again, the fellow who's been accepted for jet-pilot training in the Air Force.

APPROVED:

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