



8-1958

Discrimination as a Function of Sex and Meaning of Stimuli

Thomas Joseph Schmitz
Western Michigan University

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**DISCRIMINATION AS A FUNCTION OF
SEX AND MEANING OF STIMULI**

A Thesis

Presented to

the School of Graduate Studies

Western Michigan University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Thomas Joseph Schmitz

August 1958

ACKNOWLEDGMENTS

I should like to thank some of the many persons who helped in the completion of this thesis.

I am especially grateful to my thesis committee, presided over by Dr. Richard H. Schmidt.

I should like to thank Dr. William B. Pavlik who did much of the planning and who was a constant source of encouragement.

I am very much indebted to Mr. Ray VanWallegham who created the original line-drawings for the stimuli.

To the entire faculty of the Psychology Department, a special thank you for their willingness to suggest improvements and their expressions of encouragement.

Last of all, a vote of thanks to the participating students of the General Psychology classes.

Thomas Joseph Schmitz

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CHAPTER I

INTRODUCTION

Statement of Problem

The general purpose of this study is to determine whether discrimination is a function of the emotional content of the discriminanda (stimuli). More specifically, will a comparison of the performance of male and female subjects on a discrimination task, utilizing pictures of threatening and non-threatening parent-child relationships, lend support to or show lack of support for certain implications of Freudian hypotheses concerning the roles of Oedipus and Electra Complexes in psychosexual development.

Background of the Study

The genesis of the problem is in Freudian conceptualization of the psychosexual development of the child. As described by Hall and Lindzey,¹ Freud's theory states that in the earliest stage of personality development, both male and female love the mother who satisfies their needs. The other side of the coin is resentment of the father who is a rival for the mother's affection.

This situation, love for the mother and feelings of rivalry toward the father, persists in the male child and is

¹C. S. Hall and G. Lindzey, Theories of Personality. New York: Wiley and Sons, Inc., 1957, p. 53.

strengthened by the emergence of the Oedipus complex. Mullahy² reports that Adler and Fromm view the Oedipus complex as a result of maternal over-indulgence, and as a result of a combination of maternal over-protection and paternal authoritarianism. Regardless of the cause of the Oedipal situation, the male child is faced with a conflict in which he and his father are rivals for the affections of the same woman. The concomitant emergence at this point of castration anxiety helps the boy to repress his incestuous desires, and, in a sense, he resolves the Oedipus conflict.³ The result is clear cut feelings of affection toward the mother, and rather clear cut feelings of fear, rivalry or hostility toward the father.

The girl, as stated above, begins her development loving the mother and regarding the father as a rival. However, the situation is not reinforced or strengthened by the emergence of other conflicts as is the case with the boy. In the girl's case, the development of penis envy (castration anxiety) precedes⁴ the emergence of the Electra (Oedipus)

²Patrick Mullahy, Oedipus: Myth and Complex. New York: Hermitage Press, Inc., 1948. Pp. 128, 277-278.

³Calvin S. Hall, A Primer of Freudian Psychology, Third Printing. New York: The New American Library (A Mentor Book), 1957, Pp. 109-110.

⁴Calvin S. Hall, The Meaning of Dreams, first edition. New York: Harper and Brothers, 1953. Pp. 113-114; Calvin S. Hall, A Primer of Freudian Psychology, op. cit., p. 111; C. S. Hall and G. Lindzey, op. cit., p. 54; Patrick Mullahy, op. cit., p. 128.

complex. The penis envy competes with the earlier situation and the girl has a conflict between her former feelings of loving her mother and competing with her father, and the present situation in which she feels she must woo her father to gain a penis and compete with her mother. The order of occurrence of these two conflicts does not force the girl to repress either her earlier feelings or her later feelings toward her parents. Hall,⁵ and Hall and Lindzey⁶ indicate that the girl's Oedipus complex is modified but does not disappear. Mullahy⁷ interprets Freud as saying that the woman remains transfixed in the Oedipal situation until late in life when she abandons (not resolves) it. Even this is done incompletely.

Some comments on dream content as explained and outlined by Hall⁸ will serve to compare, simultaneously, male and female development. It is assumed that when people dream they dream only of conflict areas. Men's dream characters are primarily male, whereas women dream equally often of

⁵Calvin S. Hall, A Primer of Freudian Psychology, op. cit., p. 111.

⁶op. cit., p. 54.

⁷op. cit., p. 50.

⁸Calvin S. Hall, The Meaning of Dreams, op. cit., pp. 29-30.

both sexes. Hall⁹ sees this as a manifestation for women of equal amounts of emotional conflicts regarding both sexes, whereas men have emotional conflicts predominantly about their relationships with men. In dreams of sex and aggression,¹⁰ women again contend with both sexes, but men contend with only one sex. In dreams of parents, boys typically see the mother as friendly and the father as unfriendly. Women reverse this division, but the division is less sharp than it is for males.¹¹ Women are more likely to have mixed feelings about their parents and to have trouble in personal relationships because the early conceptions of parents are more vacillating.¹² Essentially, girls never solve the conflict of their relationship to their parents, whereas boys resolve the conflict by viewing the mother as friendly and the father as a rival and unfriendly.

Hall¹³ states that the human triangle, father, mother and child, is the first type of conflict that occurs which breeds anxiety. Shaffer and Shoben¹⁴ feel that all conflicts

⁹ibid.

¹⁰loc. cit., pp. 62-63.

¹¹loc. cit., p. 113.

¹²loc. cit., p. 114.

¹³Calvin S. Hall, The Meaning of Dreams, op. cit., pp. 110-111.

¹⁴L. F. Sheffer and E. J. Shoben, Jr., The Psychology of Adjustment, second edition. Boston: Houghton Mifflin Company, 1956, pp. 121-122.

are real. They also state that there seems to be a pattern of development that progresses from attitudes (toward the parent) of hostility to actual conflict to feelings of fear and anxiety regarding the recurrence of these phenomena. Eventually the point is reached where the attitudes of hostility are sufficient to arouse the anxiety.

It would be wise at this point to consider what a conflict is, or what characterizes a conflict. Miller¹⁵ states that conflict occurs only when several responses to a single situation are incompatible. The concept of ambivalence is a simultaneous existence of contradictory emotional reactions or feelings toward a person or situation. Conflict and ambivalence then are equivalent in all essential aspects. The one, conflict, being the experimental term for the other.

Shaffer and Shoben,¹⁶ in discussing Masserman's experimental investigation of conflict, point out that conflicts arouse strong emotional responses and that the response to conflicts generalizes widely and is peculiarly persistent. However, the arousal of emotional response, the generalization and persistence of the response characterized only those

¹⁵ Neal E. Miller, "Experimental Studies of Conflict," Personality and the Behavior Disorders, J. McV. Hunt, editor, Volume I. New York: Ronald Press Company, 1954, p. 456.

¹⁶ op. cit., pp. 112-119.

conflicts which were internalized by the organism, (i.e., when the animal was forced to make a choice or decision of its own). Whenever the conflict was caused by an external obstacle, the animal simply gave up. The generalization of the emotional response to other situations led to the conclusion that this emotion was anxiety (apprehension or fear) directed toward the experimental situation which aroused the emotion.

It is obvious from the reports¹⁷ concerning these experiments that some intriguing events occurred in the experimental situations. It is relatively certain that anxiety was the cause. A question that has been asked many times recently by learning theorists is whether or not anxiety is a drive. Farber¹⁸ proposes that a drive can be identified in two ways. A stimulus is said to have the properties of a drive if its elimination or reduction is reinforcing. A stimulus or situation is also said to have drive status if it has general enhancing or energizing effects (dynamogenic aspects of drive.) Dynamogenic means simply that the drive intensifies or energizes whatever reaction tendencies exist in the situation.

¹⁷Shaffer and shoben, op. cit., pp. 112-119.

¹⁸I. E. Farber, "Anxiety as a Drive State," Current Theory and Research in Motivation, M. Jones, editor, Volume II. Lincoln, Nebraska: University of Nebraska Press, 1954, p. 11.

Farber¹⁹ refers to several studies, especially by Taylor, to show that anxiety does have the dynamogenic characteristics. The properties have been demonstrated in tasks such as verbal rote-serial learning and verbal paired-associates learning. Taylor, as interpreted by Farber,²⁰ sees "anxiety as a drive which increases every and any response in a particular situation."

Freud is interpreted as saying that boys develop clear cut feelings of conflict (hostility) toward their fathers and affection toward their mothers, whereas girls will have ambivalent feelings toward both parents. Boys then are expected to show evidence of considerable conflict in situations involving the father and very little conflict in situations involving the mother. The amount of conflict shown by girls toward both parents will fall somewhere between the amounts of conflict boys show toward fathers and mothers. The amount of conflict is assumed to give rise to a proportionate amount of anxiety. Present drive theory and findings regarding the status of anxiety as a drive lead to an expectation of greater drive level in situations involving boys and their fathers, a much lower drive level in situations involving boys and their mothers, and an intermediate drive level for girls in situations involving either parent.

On the basis then of the traditional psychological

¹⁹loc. cit., p. 28.

²⁰loc. cit., p. 34.

assumptions regarding psychosexual development, the role of Oedipus complexes, and on the basis of recent postulations regarding anxiety and the influence of drives on reaction tendencies, it would seem that certain predictions can be made about discrimination of subjects on certain types of stimuli. The predictions will be given immediately below and a description of the stimuli will be given in the chapter on Methodology in terms of "Father," "Mother," "Threatening" and "Non-threatening."

Predictions

1. There will be evidence of poorer discrimination (a flatter gradient) for the threatening scenes than for the non-threatening scenes.

2. There will be evidence of poorer discrimination (a flatter gradient) for the father scenes than for the mother scenes.

3. Discrimination will be a function of the sex of the experimental subject, the sex of the parental figure, and the content meaning of the picture. Specifically:

a. Father-threatening picture: Male subjects will show a poorer level of discrimination (flatter gradient) on this picture compared to themselves on the other pictures and to the female subject on all of the pictures. Female subjects will discriminate better (have a steeper gradient) on this picture than the male subjects.

b. Father non-threatening picture: Male subjects will discriminate better (have a steeper gradient) on this picture than on the father-threatening picture, but their discrimination will be poorer (a flatter gradient) than for the female subjects on this picture. Female subjects will discriminate better (have a steeper gradient) on this picture than on the father-threatening picture.

c. Mother-threatening picture: Male subjects will discriminate better (have a steeper gradient) on this picture than for either of the father pictures. Male subjects will also discriminate better than female subjects on this picture. Female subjects will show poorer discrimination (a flatter gradient) on this picture than on the father-non-threatening picture.

d. Mother-non-threatening picture: Male subjects will discriminate best (have the steepest gradient) on this picture compared to themselves on the other pictures and compared to the female subjects on all pictures. Female subjects will discriminate better (have a steeper gradient) on this picture than on either of the threatening scenes, but will not discriminate better (have a steeper gradient) on this picture than they will on the father-non-threatening scene.

CHAPTER II

METHODOLOGY

Subjects

Twenty-four (24) male and twenty-four (24) female students from undergraduate psychology classes (primarily General Psychology) at Western Michigan University, served as subjects in the experiment. All volunteered to participate in a "research study being conducted for the Master's thesis requirement."

Apparatus

A semi-darkened room was used as the experimental setting. The only light was that from the projector, the flash of the picture on the screen, and the hall light filtering through a translucent glass door.

The subject and the experimenter were seated on the same side of a 3' by 5' table. The projector and response apparatus were on the table in front of the experimenter and the subject respectively. A plywood divider 30" square attached to the response apparatus prevented the subject from observing the experimenter's movements.

The projection apparatus was the tachistoscope mounted on the Dual Constant Illumination Tachistoscope produced by the Lafayette Instrument Company of Lafayette, Indiana. A constant illumination field was not used in this study.

The response apparatus consisted of a dual telegraph key setup like those used in reaction time studies. Four #6,

1½-volt Ever-ready dry cells, connected in series, were used as a power supply for the two flashlight bulbs. The bulbs indicated to the experimenter the response which the subject made to the picture projected on the screen. The batteries and the flashlight bulbs were positioned on the experimenter's side of the divider referred to above.

A portable movie screen was placed approximately five (5) feet from the tachistoscope. The images when flashed upon the screen were approximately one (1) foot high.

The stimuli were four series of 35 mm. Kodachrome transparencies made by photographing four series of original line-drawings. The line-drawings were done in black india ink on 8½" x 11" white bond paper.

Each of the four series consisted of four pictures; an original or standard picture, and three (3) variations of the original picture. The variation in every case was a change in the position of the arm of one of the principals in the picture. In the threatening scenes the parental figure's arm "moved." whereas in the non-threatening pictures the child's arm "moved." In each series, if the position of the arm straight up in the air is taken as a position of zero degrees (0°), then the original can be described as the picture in which the arm has descended through a forward arc of thirty degrees (30°). The variations, designated one, two or three, are respectively descents of the arm through arcs of sixty degrees (60°), ninety degrees (90°) and one

hundred twenty degrees (120°). In brief, the highest position of the arm depicted was the standard and the lowest position depicted was variation three (3). Variations one (1) and two (2) were intermediate to the position of the arm in the original and in variation three (3), and the position of the arm in variation one (1) was always higher than the position in variation two (2). (See Appendix).

The designation and description of the four series of pictures is as follows:

a. **Father-threatening:** in which the father figure, scowling or looking angry, was grasping the front of the shirt of his son, and the father's right hand was raised as if to strike the boy. However, the father's right hand was never shown in actual contact with his son.

b. **Father-non-threatening:** in which the father is on his hands and knees looking with pleasure over his left shoulder at his son who is "pony-back" riding. The boy is swinging his right arm as if to urge the "horse" on.

c. **Mother-threatening:** in which the mother figure, frowning or looking angry, is pointing with her right hand and scolding her young daughter. The daughter is standing with her head bowed.

d. **Mother-non-threatening:** in which a young mother, smiling in pleasure, is holding her young child in her arms. The baby's right arm "moves" from its mother's face down to the arm of the mother.

Procedure

The subject was led into the experimental room and asked to be seated before the response apparatus,

After the experimenter and the subject were seated, these instructions were read to him.

"I am interested in how quickly persons can react to different types of pictures. I am going to show you a picture a number of times. When you see the picture, press the right-hand key as quickly as you can. However, if the picture changes any, do not press the right-hand key, but press the left-hand key as quickly as you can. Remember, I am mainly interested in how quickly you can respond.

Now are there any questions?"

If the subject asked questions about the nature of the change, he or she was told to respond with the left-hand key to any change. Questions by several subjects concerning left-handedness were answered by saying that this fact would not bias their performance. If a subject asked about responding to the very first picture he would see, he or she was told not to do so. In any event, this first response was disregarded.

Pilot studies showed that no generalization gradient could be obtained without a "speed set." To increase the probability of the subject taking the "set," an electric timer was set in full view between the tachistoscope and response apparatus, and the subject could note this as he or she entered the room. The timer was not actually in use, however.

Before beginning the presentation of pictures, the subject was asked, "Are you ready?" Each presentation was

for a period of $1/25$ of a second. There was an average of ten (10) presentations of the standard for each presentation of a variable, ranging from an inter-variable spacing of eight (8) through twelve (12) presentations of the standard. The inter-variable spacing of presentations of the standard was randomized. Each variable was presented five (5) times in a pre-selected random order. Every subject saw in each of the four series of pictures a total of fifteen (15) variables and one-hundred fifty (150) standard presentations. The inter-stimulus period of time varied from a fraction of a second to two (2) seconds. This was done as a means of inhibiting anticipatory and rhythmic response on the part of the subject.

At the end of each series, the subject was told, "You may relax for a moment." Before the next series began the subject was asked, "Are you ready again?"

Every subject, as was mentioned, saw all four series of pictures. As a means of controlling any practice effect, the four series were presented to an equal number of subjects in the four following counter-balanced orders: 1, 2, 3, 4; 2, 1, 4, 3; 4, 3, 2, 1; 3, 4, 1, 2.

Only the number of errors were recorded for each subject for each of the series of pictures. There were two types of errors recorded. One, any "same" or right-hand key response to a presentation of a variable. Two, any "different" or left-hand key response to a presentation of the standard picture.

At the end of the presentation of the four series of pictures, each subject was asked to tell briefly "who was in the pictures" and "a little about what was happening."

At the end of the experimental period, every subject was asked not to discuss the nature of the pictures with other students in General Psychology classes, since this information could conceivably influence the results. The entire experimental period lasted approximately twenty-five (25) minutes.

CHAPTER III
RESULTS AND DISCUSSION

Results

In the statistical analysis of the results, only the errors made on the variations of the pictures are considered. All errors on each series are lumped together, disregarding the counter-balanced orders and the errors per variation (i.e., no distinction is made between errors on variations one or two or three). Table I gives the results of the analysis of variance of these errors.

TABLE I

Analysis of Variance of Performance On All Conditions

Source of Variation	Degrees of Freedom	Mean Squares	F-Ratio
Between Groups:	7	038.00	2.78 **
Sex of Subject	1	033.33	2.42
Meaning of Picture	1	108.00	7.84 **
Sex of Picture	1	058.52	4.25 *
Interaction	1	021.34	1.55
Sex of Subject			
Sex of Picture			
Interaction	1	003.53	--
Sex of Subject			
Meaning of Picture			
Interaction	1	035.02	2.54
Sex of Picture			
Meaning of Picture			
Interaction	1	006.18	--
Meaning of Picture			
Sex of Subject			
Sex of Picture			
Within Groups	184	013.77	--

**Indicates significance beyond the .01 level of confidence.

* Indicates significance beyond the .05 level of confidence.

The analysis of variance between groups is significant beyond the .01 level of confidence, indicating that there are significant effects among the experimental variables.

None of the analyses of variance of interactions between conditions approaches significance. The interactions between Meaning of Picture, Sex of Picture and Sex of Subject and between Sex of Subject and Meaning of Picture yield an F-ratio of less than 1.00, thus essentially invalidating predictions 3a, 3b, 3c and 3d, the specific predictions concerning the discrimination of experimental subjects on the various series of pictures.

However, a graphic presentation (See Figure 1, page 18) does aid in judging these predictions and points up certain trends and tendencies.

Prediction 3a. Father-threatening picture: Male subjects will show the poorest level of all on this picture and female subjects will discriminate better on this picture than will the males.

The graph shows that instead of all levels of discrimination being better than that of the male subjects on this picture, only two levels of discrimination, those achieved by the male and female groups on the mother-threatening picture, are better.

Prediction 3b. Father-non-threatening picture: Males will do better than on the father-threatening picture, but perform poorer than the females on this picture. Females

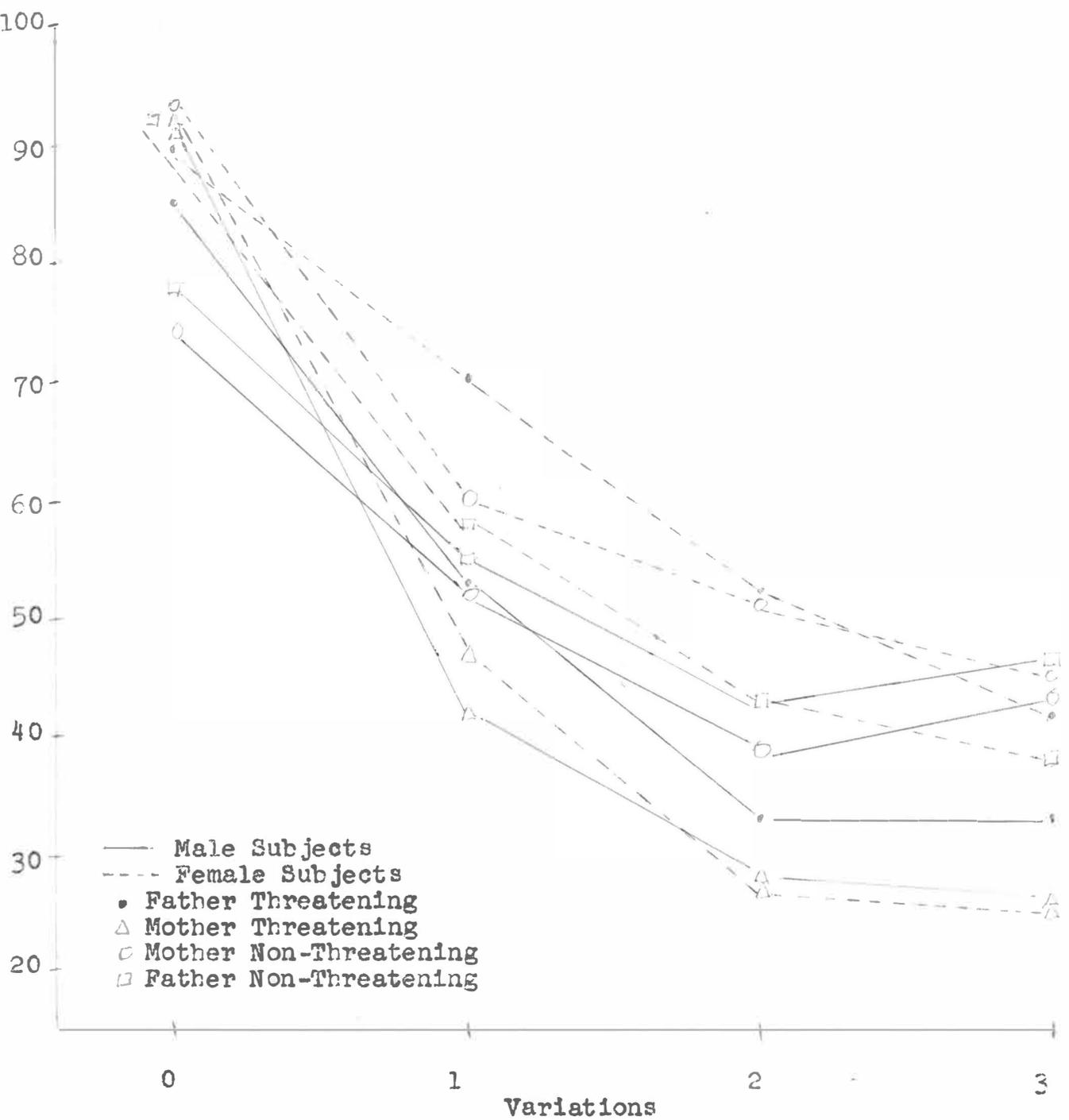


FIGURE 1

A GRAPHIC PRESENTATION OF GENERALIZATION GRADIENTS OBTAINED BY THE SEX GROUPS ON THE VARIOUS SERIES OF PICTURES

will do better than on the father-threatening picture.

The graph shows that the male level of discrimination on this picture was much poorer than on the father-threatening series and was poorer than the female level only on variations two (2) and three (3). Female subjects did do better on this picture than on the father-threatening picture.

Prediction 3c. Mother-threatening picture: Male subjects will discriminate better on this picture than on either father picture and will surpass female subjects on this picture. Female subjects will show a poorer level of discrimination on this picture than they will on the father-non-threatening position.

The graph shows that male subjects do discriminate better on this picture than on either father picture, but they do not surpass the level of discrimination achieved by female subjects on this picture. The two generalization curves are nearly identical. Female subjects show better results on this picture than on the father-non-threatening picture. This is the opposite of the predicted condition.

Prediction 3d. Mother-non-threatening picture: Male subjects will discriminate best of all on this picture compared to themselves and female subjects on all pictures. Female subjects will discriminate better on this picture than on either threatening picture, but poorer than on the father-non-threatening picture.

The graph shows that the male subjects only discriminate better on this picture than they do on the father-non-threatening picture, but better than female subjects on all pictures except the mother-threatening picture. Female subjects discriminate more poorly on this picture than the male subjects on all pictures and more poorly than they (the females) do on the other pictures.

The analysis of variance for each of the three main conditions show that the sex of the subject was not a significant variable. The meaning of the picture is significant, and the sex of the picture is significant. However, although this substantiates the prediction of difference between conditions of meaning of picture and sex of picture, the results for the meaning of the picture are in the opposite direction of that predicted.

Prediction 1. Meaning of picture: there will be poorer discrimination on the threatening pictures than on the non-threatening pictures.

The analysis of variance yields an F-ratio of 7.84, which for one (1) and one hundred eighty-four (184) degrees of freedom, is significant beyond the .01 level of confidence. Discrimination is better rather than poorer on the threatening pictures than on the non-threatening pictures. (See Figure 2).

Prediction 2. Sex of Picture: there will be poorer discrimination for the father pictures than for the mother pictures.

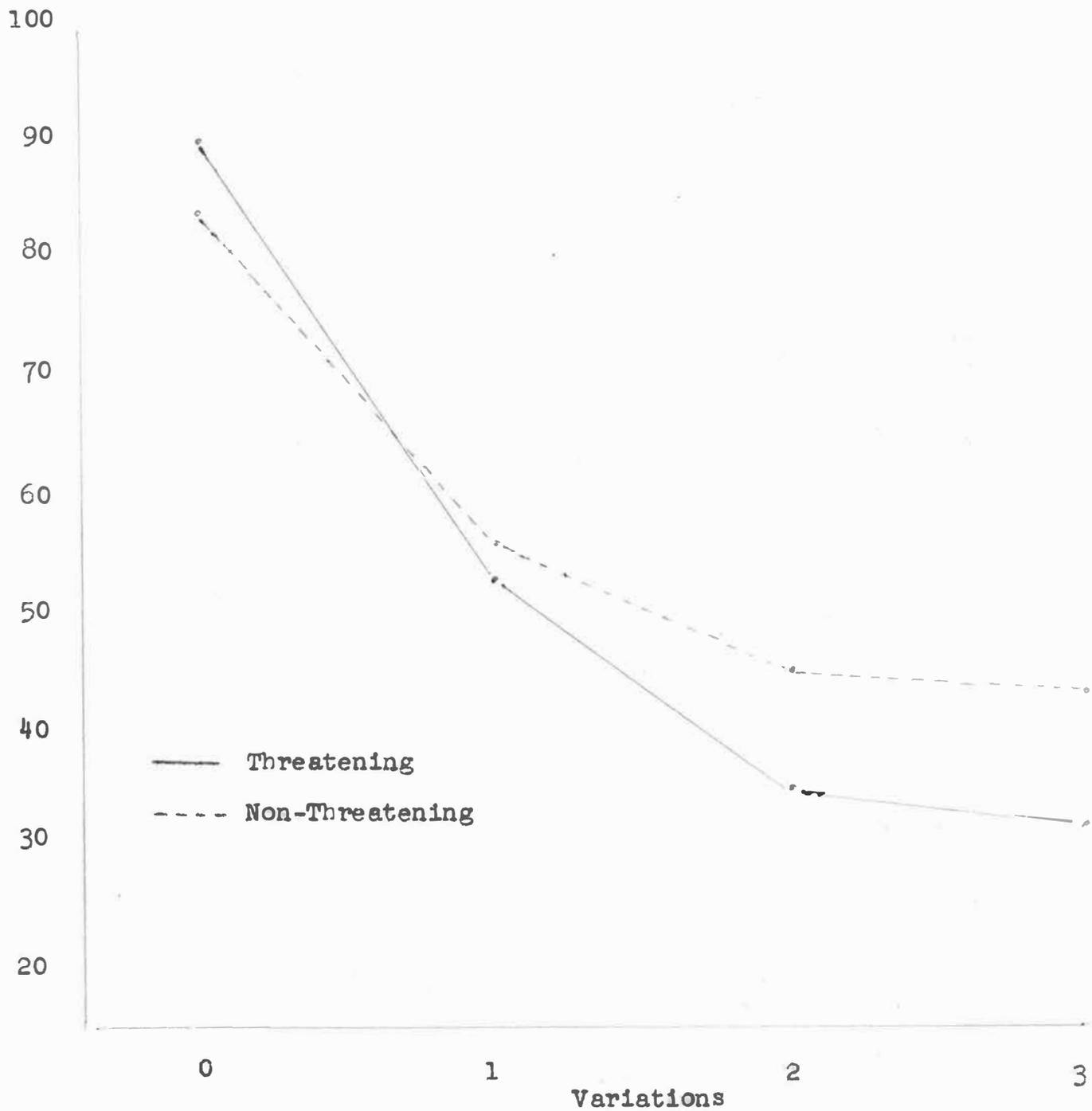


FIGURE 2

A GRAPHIC PRESENTATION OF GENERALIZATION
GRADIENTS OBTAINED BY DISREGARDING
ALL FACTORS EXCEPT MEANING OF PICTURE

The analysis of variance yields an F-ratio of 4.25, which, for one (1) and one hundred eighty-four (184) degrees of freedom, is significant beyond the .05 level of confidence. The results are in the direction predicted, the level of discrimination is poorer on the father pictures than on the mother pictures (See Figure 3, page 22).

In response to the questions, "who was in the picture?" and "what was happening?" typically the subjects forgot one or more of the series of pictures. Tabulation of these errors, failure to recall the various pictures, is presented in Table II.

TABLE II

Tabulation of Failure To Recall
The Various Series Of Stimuli

Picture	Male Errors	Female Errors	Totals
Father-threatening	11	15	26
Father-non-threatening	4	3	7
Mother-threatening	7	15	22
Mother-non-threatening	2	1	3
Totals	24	34	58

The female subjects have a higher total number of errors, and the highest number of errors on an individual picture, (fifteen errors on the father-threatening and mother-threatening pictures). Male subjects have more errors on the father-threatening picture than on the mother-threatening picture, but fewer errors than the female subjects on the threatening pictures.

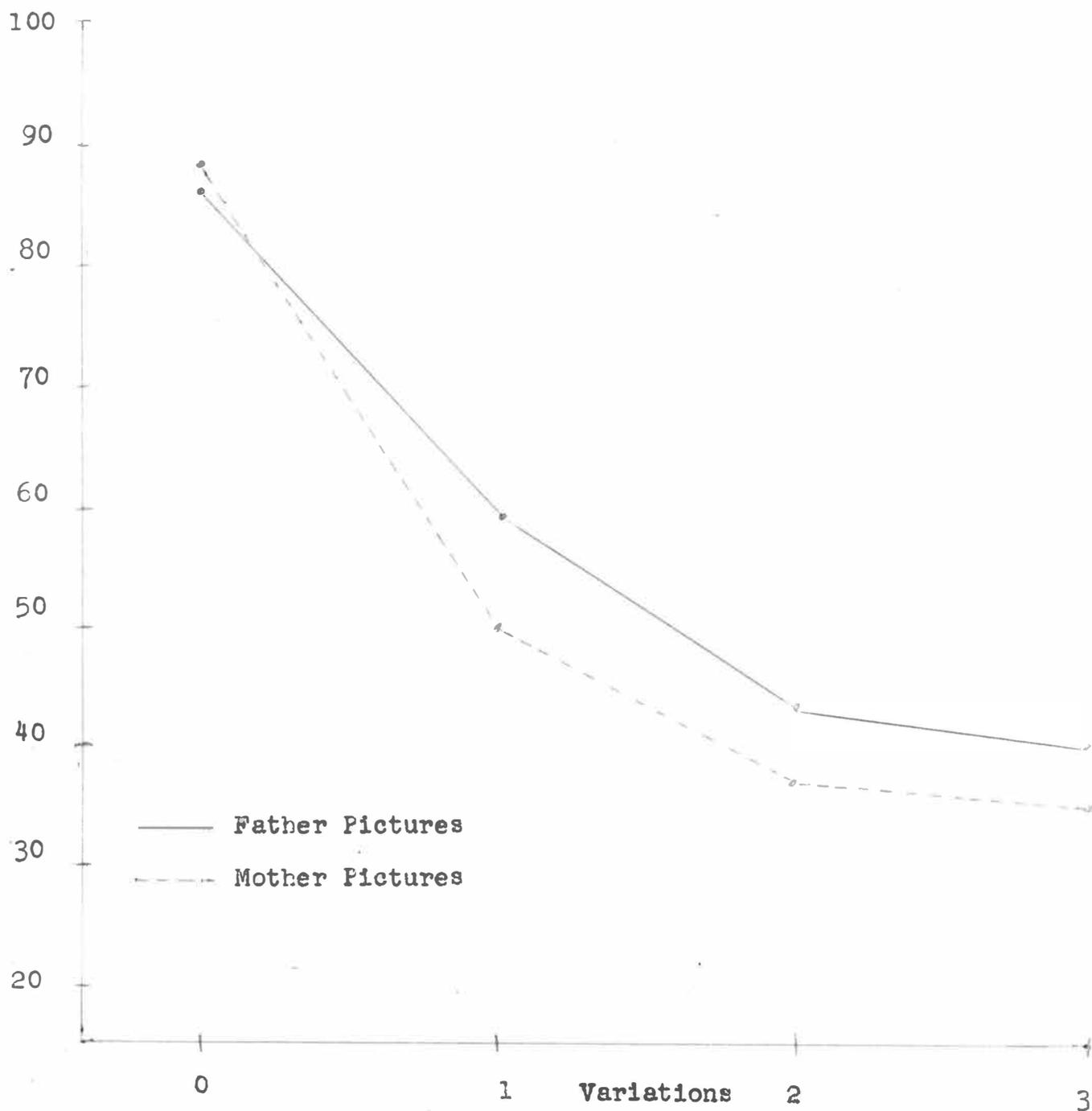


FIGURE 3

A GRAPHIC PRESENTATION OF GENERALIZATION
GRADIENTS OBTAINED BY DISREGARDING
ALL FACTORS EXCEPT SEX OF PICTURE

The chi-square for all conditions (See Figure 4, page 24) is 31.63, which for seven (7) degrees of freedom, is significant well beyond the .01 level of confidence. This indicates that there are factors other than chance operating. Chi-squares for the sex of the picture and the sex of the subject are not significant. However, the chi-square of the meaning of the picture is 24.90, which, for one (1) degree of freedom is significant well beyond the .01 level of confidence. The threatening scenes are forgotten significantly more often than are the non-threatening pictures.

Discussion

Perhaps the most important result of the entire study is the finding that the main variable, sex of the subject, had no significant effect on the level of discrimination. The very basic assumptions regarding the Oedipus Complex and Freudian assumptions regarding psycho-sexual development does not seem to be supported, or at least not applicable, in American culture and society. It may be support for the contentions of so-called Neo-Freudians, that Freud was wrong in his assertions about relationships between parents and children. However, it is entirely possible that these results would not be obtained with a younger age-group and are but a reflection of the child's ability to learn not to be affected in later life by the very early influences in the family circle. It may be that the subjects were not fully aware of the situations depicted and therefore their

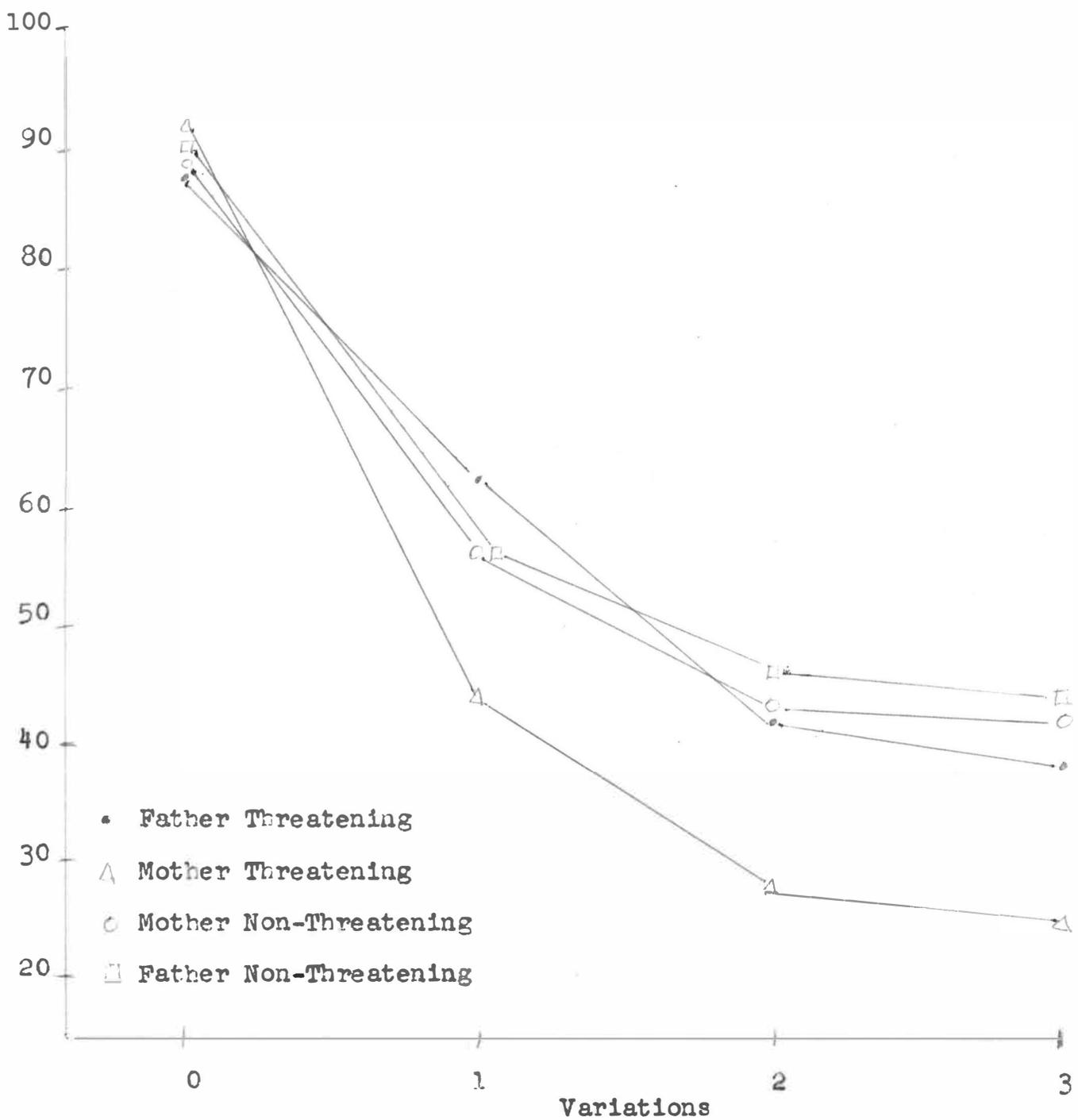


FIGURE 4

A GRAPHIC PRESENTATION OF GENERALIZATION GRADIENTS OBTAINED BY SIMULTANEOUS CONSIDERATION OF THE FACTORS: SEX AND MEANING OF PICTURE

emotions were not aroused, yet the results obtained on the other main effects would not seem to warrant this interpretation.

The reversal of direction of the difference on the meaning of the picture is surprising at first glance. In retrospect, it seems it could possibly have been predicted. One possible explanation is in the pictures themselves. The non-threatening pictures are much more compact than the threatening pictures. For example, in the projected image of the threatening pictures, there were approximately four (4) inches separating the parental figure from the child. In the non-threatening picture no space separated the figures; the bodies of parent and child in each of the non-threatening pictures were in direct contact with one another.

The high level of performance by the male and female subjects on the mother-threatening picture and by the male subjects on the father-threatening picture (Figure 1) indicates that here is the chief source of difference in the main effect, meaning of picture. The main source of the differential discrimination could be the difference in composition of the picture, the space vs. non-space explanation.

The poor level of discrimination on the father pictures in comparison to the mother pictures was predicted. This result was expected because of Freudian hypothecon regarding parent-child relationships. The lack of any difference based on sex of subject, however, might indicate

that the explanation of this finding need not warrant reliance upon Freudian assumptions. The level of discrimination achieved on the mother-threatening picture may suggest that the picture created the greatest anxiety in the subjects and resulted in this higher performance. An implication of this line of reasoning is that American Society is a matriarchal one, or at least that relationships between mother and child are more important than relationships between father and child.

The finding that threatening pictures were forgotten more frequently than non-threatening pictures does not, at first, seem to coincide with the poorer discrimination of the subjects on the non-threatening pictures. An answer for this may be, that it is a process of remembering the pleasant things and forgetting (repressing) the unpleasant events. If such was indeed the case, then this finding would indicate that certain conditions (the arousal of anxiety) may have the opposite effects of facilitating present performance but inhibiting later recall. Such an unusual finding warrants further research.

The results of the present study are in some conflict with the results obtained by Dunn²¹, who found that male schizophrenics and normals differed significantly in their

²¹W. L. Dunn, Jr., "Visual Discrimination of Schizophrenic Subjects as a Function of Stimulus Meaning," Journal of Personality, Vol. 23, pp. 48-64, 1954.

ability to discriminate on scolding scenes, and that both groups discriminated more poorly on the scolding scenes than on the Feeding or Whipping scenes. The Scolding and Feeding scenes can be equated with the threatening and non-threatening scenes in the present study. It is recommended that a study be done involving both silhouettes (as used by Dunn), and line-drawing stimuli (as used in the present study). It also would be interesting for a study to be made using these same four general themes in the stimuli, but with more adequate control of the composition of the pictures. It is further recommended that additional studies be done utilizing other types of threatening, non-threatening, or affectionate scenes as discriminanda.

CHAPTER IV

SUMMARY AND CONCLUSION

Summary

This study was an investigation of the problem of visual discrimination as a function of emotional content of the stimuli. A secondary problem was the question of differential discrimination of the sexes.

The literature which pertained to traditional assumptions regarding dreams, the Oedipus Complex and psychosexual development was reviewed. Studies on experimental neuroses, studies of anxiety and current drive theory were summarized and the applicable findings of these studies were indicated. The fact that boys were assumed to have clear-cut feelings toward each parent, competition with the father and affection toward the mother, and that girls were more likely to have ambivalent feelings toward both parents was indicative of conflict in the child's relationships to the parent. Experimental investigation has shown that this conflict generated in a person the equivalent of the phenomenon, anxiety, produced and observed in experimental conflicts. Recent research has shown that anxiety acts in an energizing manner that affects performance.

On the preceding bases several predictions were made. The main predictions were:

1. There would be poorer discrimination on the threatening pictures than on the non-threatening pictures.

2. There would be poorer discrimination on the father pictures than on the mother pictures.

Each subject saw all four series of pictures, which were designated father-threatening, father-non-threatening, mother-threatening and mother-non-threatening. Each series consisted of an original or standard picture and three variations. During the experimental period every variation was presented five (5) times and the standard picture was shown ten (10) times as often. The pictures were flashed on a screen for $1/25$ of a second at a rate of approximately one per second.

The subject was asked to press the right-hand key of a dual telegraph key apparatus if the picture was the standard and the left-hand key if there was any change. The subject was asked to respond as quickly as possible. Only the subject's errors, pressing the wrong key at any time, were recorded.

An analysis of variance showed that none of the interactions was significant. An F-ratio, significant beyond the .05 level of confidence, was found for two main effects, meaning of picture and sex of picture. The results obtained for the meaning of picture were in the direction opposite to that which was predicted. This was possibly due to the compactness of the non-threatening stimuli and the space between figures in the threatening pictures, which might

facilitate discrimination on the latter pictures. Discrimination on the father pictures was poorer than on the mother pictures and it would seem that this might indicate that relationships between child and mother are more important than relationships between a child and its father.

Conclusion

Within the limits of this study of visual discrimination, there is an indication that the sex of experimental subject does not have a bearing on the level of discrimination. Meaning of picture, threatening or non-threatening, was a significant variable. The poorer discrimination on the non-threatening picture was possibly a function of the composition of the pictures. Sex of the parent pictured in the stimuli was also a significant variable. Several implications which these results have for traditional assumptions in psychology were pointed out and recommendations for future studies were made.

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APPENDIX

Prints of the Standard Scene
of Each of the Series of Pictures



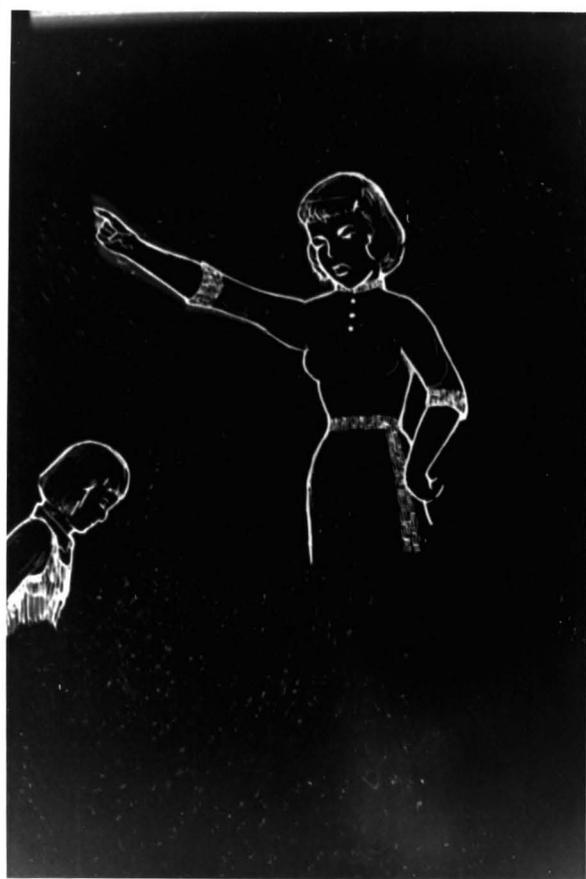
Father Threatening



Father Non-Threatening

APPENDIX

Prints of the Standard Scene
of Each of the Series of Pictures



Mother Threatening

Mother Non-Threatening