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UPON VOCATIONAL CHOICE OF ADOLESCENTS:
AN INVESTIGATION OF ROE'S THEORY.

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RELATIONSHIP WITH PARENTS AS AN INFLUENCE
UPON VOCATIONAL CHOICE OF ADOLESCENTS:
AN INVESTIGATION OF ROE'S THEORY

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RELATIONSHIP WITH PARENTS AS AN INFLUENCE
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RELATIONSHIP WITH PARENTS AS AN INFLUENCE
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CHAPTER I

INTRODUCTION

Statement of the Problem

The purpose of this study was to investigate and analyze the effect of parental influence upon the vocational choice of adolescents. (See Appendix I for definitions.) The problem was to test a theory first formulated by Roe¹ to the effect that an individual is predisposed towards work predominately person oriented, or towards work predominately non-person² oriented as a direct result of the parent-child relationship experienced within the family environment.

This study was an attempt to determine if a child who has experienced a warm, loving, and protecting family environment would

¹Anne Roe, "Early Determinants of Vocational Choice," Journal of Counseling Psychology, IV, No. 3 (Fall, 1957), pp. 212-217.

²Non-person oriented subjects would gravitate towards other living things, inanimate things, or ideas rather than other persons.

gravitate towards an occupation primarily involving people; and, if a child who has experienced a cold, rejecting, and neglecting family environment would gravitate towards an occupation not primarily involving people. The extent to which the subject was familiar with, or knew the job titles in the world of work was not germane to the present study. Neither was the subject's ultimate vocational choice as an adult.

A measure of the parent-child relationship was derived from a modification of the Roe-Siegelman Parent-Child Relations Questionnaire³ (hereinafter referred to as the PCR). The vocational choice of each seventh grade child in the sample was specified at the time of the PCR administration. Each subject responded to the question, "What kind of work would you most like to do if you had the opportunity and ability?" These responses were then classified according to Roe's occupational classification.⁴ The degree to which the parent-child relationship influenced this vocational choice was analyzed by appropriate statistics.

Background of the Study

Roe's general hypothesis is that there exists a relationship between early experience and later attitudes, abilities, interests, and

³Anne Roe and Marvin Siegelman, A Parent-Child Relations Questionnaire (Cambridge, Massachusetts: Graduate School of Education, Harvard University, 1962). See Appendix II for the modification used in the present study.

⁴Anne Roe, The Psychology of Occupations (New York: John Wiley and Sons, 1956). See Appendix III for a brief description and some examples of occupations for each classification.

other personality factors which affect the ultimate vocational selection of the individual.⁵ Roe contended that this hypothesis is valid regardless of the differences between gross cultural subdivisions. Further discussion of this relationship will be contained in the review of the literature.

A critical point in Roe's theory is that the patterning of special ability development is largely controlled by the directions in which psychic energy is expended automatically and involuntarily. Further, that these directions are determined by the patterning of early satisfactions and frustrations of the individual's needs. Maslow's⁶ hierarchical classification of needs was used as a focal point for Roe's hypothesis.

Maslow's theory states that higher-order needs cannot appear until lower-order needs are at least relatively well satisfied. The hierarchy of needs, as postulated by Maslow, is reproduced in Table 1.

Roe is primarily concerned with the higher-order needs. The relationship of needs to motivation of behavior, as abstracted from Roe's theory⁷ is as follows:

1. The intensity of unconscious needs is the major determinant of motivation expressed in accomplishment.

⁵Roe, Journal of Counseling Psychology, IV, No. 3, pp. 212-217.

⁶A. H. Maslow, Motivation and Personality (New York: Harper and Brothers, 1954), pp. 107-122.

⁷Roe, Journal of Counseling Psychology, IV, No. 3, p. 214.

2. Needs satisfied routinely do not develop into unconscious motivators.
3. Needs for which minimum satisfaction is rarely achieved will be expunged if of a higher order and if of a lower order will prevent the appearance of higher-order needs; these rarely satisfied needs will become dominant and restricting motivators.
4. Needs will become unconscious motivators when their satisfaction is delayed but eventually accomplished.

TABLE 1⁸

BASIC NEEDS (MASLOW)

-
-
1. Physiological needs (lowest order)
 2. Safety needs
 3. Need for belongingness and love
 4. Need for importance, respect, self-esteem, independence
 5. Need for information
 6. Need for understanding
 7. Need for beauty
 8. Need for self-actualization*
-

*Roe places this need lower in the hierarchy, or considers it a more general need.

Roe contends that the relationship existing between parent and child, as it serves to satisfy or frustrate the child's basic needs, will

⁸Ibid., p. 213.

operate to pattern the direction of psychic energy release and thus influence his orientation towards persons or non-persons. The terminology "towards persons or non-persons" is used intentionally by Roe to obviate the implication of defensiveness derived from the term "away from persons." Basically, the individual is oriented towards non-persons, no so much away from persons. It is not the shunning of persons per se that brings satisfaction of needs, but rather that non-persons satisfy his needs more fully and completely. A non-person oriented individual need not necessarily be asocial or anti-social.

Roe's theory conveys the premise that if an individual has had his basic needs satisfied by persons, he will gravitate towards persons for continued satisfaction of those, and higher-order needs. If the individual's lower-order needs are not satisfied by persons, he will seek such satisfaction with non-person things, i. e., other living things, inanimate things, or ideas. If these lower-order needs continue to be unsatisfied they will prevent the appearance of higher-order needs. The individual, then, will continue to seek lower-order need satisfaction from more impersonal sources which will lead eventually to a non-person occupation. Additionally, if the individual's needs have not been satisfied by persons, but have been satisfied by non-persons, he will gravitate towards non-persons for continued satisfaction of those and higher-order needs. Thus, individuals who have experienced an emotionally warm, accepting, protecting parent-child relationship, which satisfies lower-order needs, will orient towards person occupations which Roe classifies as service, business contact, organization,

general culture, and arts and entertainment.⁹ Conversely, individuals who have experienced an emotionally cold, rejecting, neglecting parent-child relationship, which does not satisfy lower-order needs, will orient towards non-person occupations which Roe classifies as technology, outdoors, and the sciences.¹⁰ (See Figure 1 for an adaptation of Roe's model¹¹ of the hypothetical construct.)

Roe classifies Demanding as having an orientation towards persons, and Casual as having an orientation towards non-persons.¹² Switzer, et. al.¹³ found a reversal in the occupational direction of Demanding. For the present study, Demanding is considered to be a cold, negative behavior and is, therefore, categorized as a non-person relationship. Additionally, Casual was placed by Roe in a category denoting the children to be ". . . full fledged members of the family circle",¹⁴ thus showing an inconsistency as to its orientation. Accordingly, in the present study, this behavior is considered to be more warm than cold, and is therefore categorized as a person relationship.

⁹Roe, The Psychology of

¹⁰Ibid.

¹¹Roe, Journal of Counseling Psychology, IV, No. 3, pp. 212-217, and Roe and Siegelman, A Parent-Child Relations, p. 10.

¹²Ibid.

¹³David K. Switzer, Austin E. Grigg, Jerome S. Miller and Robert K. Young, "Early Experiences and Occupational Choice: A Test of Roe's Hypothesis," Journal of Counseling Psychology, IX, No. 1 (Spring, 1962), pp. 45-48.

¹⁴Roe, Journal of Counseling Psychology, IV, No. 3, pp. 212-217.

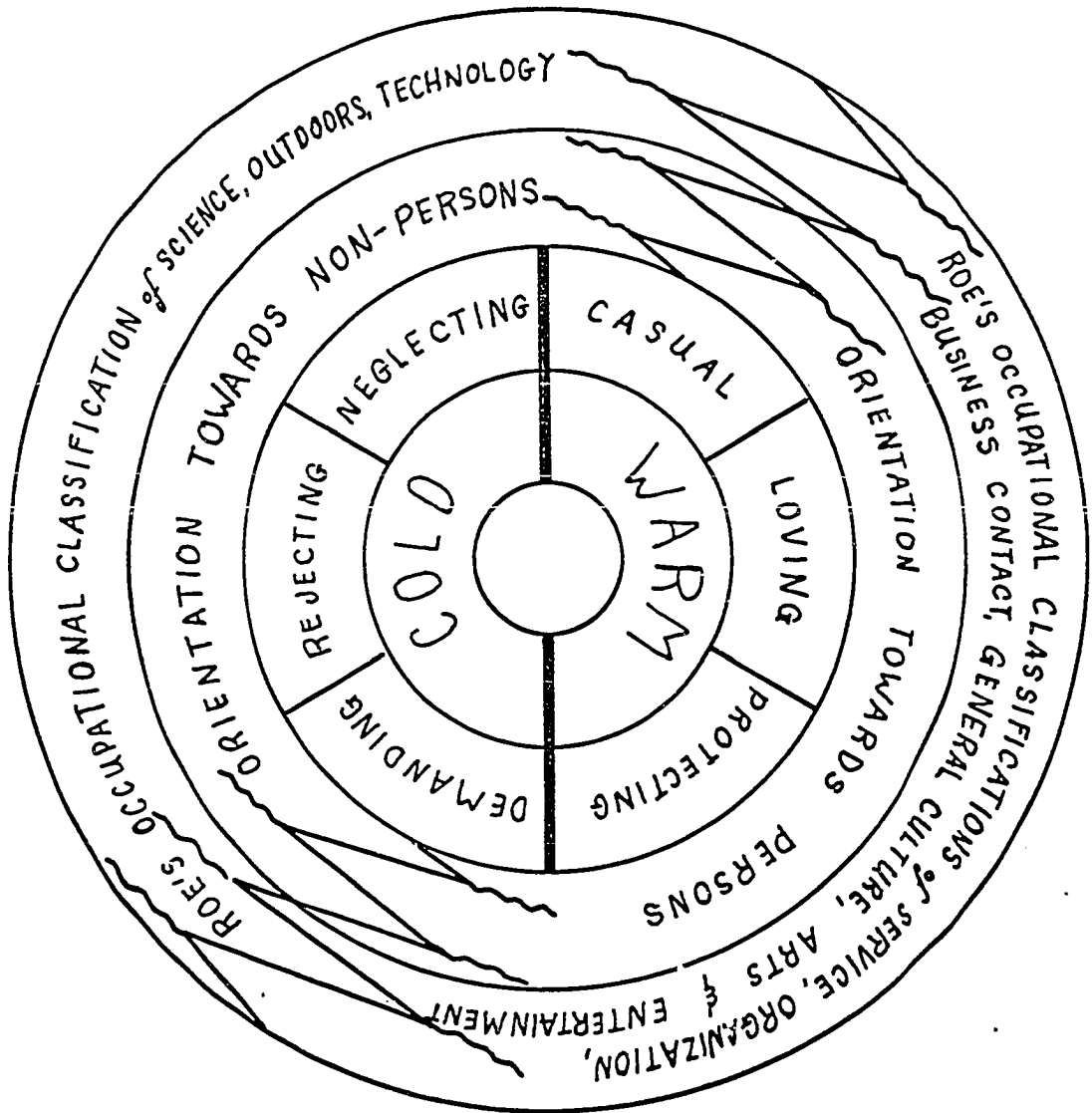


FIGURE 1.

ADAPTATION OF ROE'S HYPOTHETICAL CONSTRUCT MODEL

Need for the Study

The need for the present study is supported by a review of the literature (see Chapter II). This review focused upon youth's perception of reality, their familial relationships, and their occupational choice development.

The literature also provided ample testimony for the observation that children are, and should be, making occupational observations and choices earlier in life. MacCurdy¹⁵ reported that thirty-seven of seventy-five Science Talent Search winners had decided to become scientists when they were in elementary school. A representative sample of essentially similar literature is cited below.¹⁶

¹⁵R. D. MacCurdy, "Characteristics of Superior Science Students," Science Education, XL, No. 1 (February, 1956), p. 3.

¹⁶Donald A. Davis, Nellie Hagen, and Judee Strong, "Occupational Choice of Twelve Year Olds," Personnel and Guidance Journal, XL, No. 7 (March, 1962), pp. 628-629.

Janet Kaye, "Fourth Graders Meet Up with Occupations," Vocational Guidance Quarterly, VIII, No. 3 (Spring, 1960), pp. 150-152.

Donald E. Super, "The Critical Ninth Grade: Vocational Choice or Vocational Exploration," Personnel and Guidance Journal, XXXIX, No. 2 (October, 1960), pp. 106-109.

Robert Hoppock, "Occupational Information in the Elementary School," Vocational Guidance Quarterly, XII, No. 2 (Winter, 1963-64), pp. 77-84.

Donald E. Super, David V. Tiedeman, and Henry Borew, "Vocational Development: A Symposium," Personnel and Guidance Journal, XL, No. 1 (September, 1961), pp. 11-25.

Mussen has noted that "despite the increasing stability and realism of the adolescent's vocational interests, there is considerable evidence that he cannot be left to his own devices in dealing with his vocational problems."¹⁷ There is evidence which suggests that parents represent significant figures in the adolescent's vocational choice process.¹⁸

The strength and significance of the parent-child relationship over any other relationship which the child may experience was shown by Tiedeman and Pandit¹⁹ in their study on ego-identity with eleventh

¹⁷P. H. Mussen, J. J. Conger, and J. Kagan, Child Development and Personality, 2nd edition (New York: Harper and Row, 1963), p. 562.

¹⁸Betty K. Steinke and Henry R. Kackewski, "Parents Influence the Occupational Choice of Ninth Grade Girls," Vocational Guidance Quarterly, IX, No. 2 (Winter, 1960-61), pp. 101-103.

Stanley Krippner, "Junior High School Students' Vocational Preference and Their Parents' Occupational Level," Personnel and Guidance Journal, XLI, No. 7 (March, 1963), pp. 590-595.

John F. Kinnane and Martin W. Pable, "Family Background and Work Value Orientation," Journal of Counseling Psychology, IX, No. 4 (Winter, 1962), pp. 320-325.

Henry Borow, "Vocational Development Research: Some Problems of Logical and Experimental Form," Personnel and Guidance Journal, XI, No. 1 (September, 1961), pp. 21-25.

Although the subjects are of another culture it is interesting to note that similar findings were reported by Sheila H. Chown, "Personality Factors in the Formation of Occupational Choice," British Journal of Educational Psychology, XXIX, Part I (February, 1959), pp. 23-33.

¹⁹David W. Tiedeman and Jirval Lal Pandit, "On Identity and Level of Occupational Aspiration," Harvard Studies in Career Development, No. 9 (Cambridge, Massachusetts: Harvard Graduate School of Education, Harvard University, December, 1958, mimeographed).

and twelfth grade high school students. Of the three most significant influencing relationships studied: peer sector, teacher sector, and parent sector, the parents' estimate of the subject was closest to the subject's concept of himself. The study showed that a person's self-concept more closely parallels his parents' concept of him, than it does the peer or teacher's concept of him. Tiedeman and Pandit also found that "... the level of occupational aspiration definitely depends on the identity an adolescent perceives himself to have attained in the social system of relevance to him."²⁰ If this is significant for the older eleventh and twelfth grade adolescents, it seemed highly probable that it might be equally significant for the seventh grade adolescent who has not yet come under the full impact of the peer group influence. These findings are in agreement with Super's²¹ theory of development of the self-concept as a means of explaining vocational choice: "The self-concept begins to take shape, the kind of role one may play in life begins to emerge . . . even within the shelter of the home."²² Bordin's²³ work also suggests that vocational interests are partly expressions of the self-concept: "In answering [questions about vocational interests] an individual is expressing his acceptance of a

²⁰Ibid., p. 23.

²¹Donald E. Super, Psychology of Careers (New York: Harper and Brothers, 1957), pp. 80-100.

²²Ibid., p. 84.

²³E. S. Bordin, "A Theory of Vocational Interests as Dynamic Phenomena," Educational and Psychological Measurement, III (1943), pp. 49-65.

particular view or concept of himself in terms of occupational stereotypes."²⁴ The work of Friend and Haggard²⁵ gives more than ample testimony about the impact that the family relationship has upon making a satisfactory work adjustment in adulthood:

". . . job satisfaction derived from certain subtle rewards which dovetailed with the individual's personal needs. . . . Clues to the drives of the individual lay . . . close to the way a man felt about his family when he was growing up."²⁶

No study is reported that has systematically investigated the effect of parental influence upon vocational choice of younger groups. Only college and adult populations have been utilized, using the technique of reminiscence. Studies using older samples of the population cannot be considered analogous to younger samples. It was felt that a temporal setting to evaluate on-going parent-child relations was needed to test effectively parental influences.

Additionally, the work of Super and Overstreet,²⁷ and O'Hara and Tiedeman²⁸ support the contention that it is incumbent upon adults to

²⁴Ibid., p. 53.

²⁵Jeannette G. Friend and E. A. Haggard, "Work Adjustment in Relation to Family Background," Applied Psychological Monograph, No. 16 (June, 1948).

²⁶Ibid., p. 12.

²⁷Donald E. Super and Phoebe L. Overstreet, The Vocational Maturity of Ninth Grade Boys (New York: Teachers College, Columbia University, Bureau of Publications, 1960).

²⁸R. P. O'Hara and D. V. Tiedeman, "The Vocational Self-Concept in Adolescence," Journal of Counseling Psychology, VI, No. 4 (Winter, 1959), pp. 292-301.

help young people early in life to explore, examine, and analyze all of those factors leading to wiser vocational choice. As Hoppock has noted, ". . . we might hope to help young people to reach wiser decisions earlier in life if we could increase the accuracy and the adequacy of the occupational information at their disposal during what Ginzberg has called the 'fantasy' [before eleven years of age] and the 'tentative' [from ages eleven to seventeen] stages."²⁹

With the need for implementation of guidance services at earlier stages in the educational structure, it appears that all educators, and particularly counselors, will require knowledge of how parents may influence the vocational choice process. At such time as the etiology of vocational choice is understood, this ". . . knowledge of causes [will permit] an institution or a community to take preventive measures, and it is for a profession of specialists to discover and publicize them."³⁰ The rapid and complex changes being experienced in our society dictate an analysis of the forces and variables experienced early in life, which influence occupational choice. More data are needed to determine the extent to which the family constellation represents an influencing factor in the vocational choice process.

²⁹ Robert Hoppock, Occupational Information (New York: McGraw-Hill, 1963), p. 103.

³⁰ Milton Schwebel, "Some Missing Links in Counseling Theory and Research," Personnel and Guidance Journal, XII, No. 4 (December, 1962), p. 325.

It becomes critical, then, to examine what forces and influences the parents present in the vocational orientation of youth; and particularly at a critical stage in development -- the adolescent level. We need to know more about the behavioral climates present in various family environments that influence differentially the behavior of youth and the vocational decision process.

Hypotheses

An analysis of Roe's theory and those parent-child relationships tested by the PCR suggested some hypotheses about early home experiences and vocational orientation of the child. Six hypotheses were generated directly from the PCR subtests, and the adaptation of Roe's model, shown in Figure 1. These are:

1. Children experiencing a Loving³¹ relationship in the home should orient towards a person occupation,³² i. e., service, business contact, general culture, arts and entertainment, and organization.
2. Children experiencing a Protecting relationship in the home should orient towards a person occupation.

³¹ Behaviors included in the PCR are: Loving, Protecting, Casual, Rejecting, Neglecting, Demanding, Reward Direct-Object, Reward Symbolic-Love, Punishment Direct-Object, and Punishment Symbolic-Love. See Appendix IV for definitions of each.

³² See Appendix III for definitions and examples of those occupations in person occupations and non-person occupations.

3. Children experiencing a Casual relationship in the home should orient towards a person occupation.
4. Children experiencing a Rejecting relationship in the home should orient towards a non-person occupation, i. e., technology, science, outdoors.
5. Children experiencing a Neglecting relationship in the home should orient towards a non-person occupation.
6. Children experiencing a Demanding relationship in the home should orient towards a non-person occupation.

Although Roe stated that ". . . no prediction was made regarding the relationship of the Reward and Punishment scales to the categories in the Roe modal,"³³ it appeared to the present investigator that these relationships might provide some impetus to the direction of occupational choice of the child. Additionally, the work of Sears, Maccoby, and Levin³⁴ supported the contention that reward may be considered equatable to warmth of relationship, and that punishment may be considered equatable to a cold relationship. Accordingly, the following four hypotheses were formulated:

7. Children experiencing a Reward Symbolic-Love relationship in the home should orient towards a person occupation.
8. Children experiencing a Reward Direct-Object relationship in the home should orient towards a person occupation.

³³Roe and Siegelman, A Parent-Child Relations . . . , p. 1.

³⁴Robert E. Sears, Eleanor E. Maccoby, and Harry Levin, Patterns of Child Rearing (New York: Row Peterson and Company, 1957), pp. 314-389.

9. Children experiencing a Punishment Symbolic-Love relationship in the home should orient towards a non-person occupation.
10. Children experiencing a Punishment Direct-Object relationship in the home should orient towards a non-person occupation.

Implicit within Roe's theory³⁵ is the concept that if a child experiences a combination of complementary behavior in the home, he should orient more strongly towards a particular occupational choice. Accordingly, the following hypotheses were formulated:

11. Children experiencing a combination of Protecting, Casual, and Loving relationship in the home should orient towards a person occupation.
12. Children experiencing a combination of Rejecting, Neglecting, and Demanding relationship in the home should orient towards a non-person occupation.
13. Children experiencing a Reward Direct-Object plus Reward Symbolic-Love relationship in the home should orient towards a person occupation.
14. Children experiencing a Punishment Direct-Object plus Punishment Symbolic-Love relationship in the home should orient towards a non-person occupation.

³⁵Roe, Journal of Counseling Psychology, IV, No. 3, pp. 212-217.

15. Children experiencing the relationship totality of Protecting, Loving, Casual, Reward Symbolic-Love, and Reward Direct-Object should orient towards a person occupation.
16. Children experiencing the relationship totality of Rejecting, Demanding Neglecting, Punishment Symbolic-Love, and Punishment Direct-Object should orient towards a non-person occupation.

Roe noted that the interparent correlations of her Harvard seniors tended to run higher than did those of her adult groups. "There could quite reasonably be more halo effect [perceiving parents as a unit] in this group."³⁶ Switzer noted in his study of college undergraduate and graduate students, "... a significant finding is that there are differences between the perceived attitudes of fathers and of mothers . . . when referring to 'parental attitude' as a variable, the question may be which parent is being considered."³⁷

Accordingly, to determine if the halo effect operates to a greater degree with younger subjects, the following hypothesis was formulated:

17. Seventh grade children should exhibit more halo effect in perceiving parents than do college seniors.

Summary

Chapter I has presented the problem for this investigation. The background of the study and the need for the study were discussed. The

³⁶Roe and Siegelman, A Parent-Child Relations . . . , p. 3.

³⁷Switzer, et. al., Journal of Counseling Psychology, IX, No. 1 p. 47.

various hypotheses to be tested through the present investigation were formulated.

Chapter II will focus upon a review of the literature. Chapter III will describe the procedures used to investigate the problem. Chapter IV will analyze and report the results of the research. Chapter V will summarize the investigation, present the conclusions, and discuss the implications of the study.

CHAPTER II

A REVIEW OF THE LITERATURE

Investigations of Roe's Theory

A review of the literature produced only five investigations of Roe's theory. In her longitudinal study, which attempted to investigate some aspects of the general theory, Roe³⁸ utilized a selected sample of fifty-two boys and fifty-one girls who had been studied from twenty-one months of age to maturity by MacFarlane.³⁹ Using the already recorded behavior of parents towards their two to four year old children, as observed by MacFarlane and associates, an attempt was made to categorize these behaviors within the scope of Roe's theory. By investigating the association of these categories with Kuder scores⁴⁰ and occupational choice at seventeen years, it was hoped to find an indication of the person, non-person orientation. Difficulties were encountered

³⁸ Anne Roe and Marvin Siegelman, A Study of the Origin of Interests (Cambridge, Massachusetts: Harvard Graduate School of Education, Harvard University, 1962, mimeographed), pp. 4-7.

³⁹ J. W. MacFarlane, L. Allen, and M. P. Honsils, A Developmental Study of the Behavior Problems of Normal Children Between Twenty-One Months and Fourteen Years (Berkeley, California: University of California Press, 1954), cited in Roe and Siegelman, A Study of the Origin. . . , p. 3.

⁴⁰ G. Frederick Kuder, Kuder Preference Record - Vocational (Chicago, Illinois: Science Research Associates, Inc., 1956).

tered with categorizing parents' behavior and the children's perception of the parents' attitude. Also, there was dissatisfaction with the scales of the Euder, which ". . . do not have a clear person or non-person reference."⁴¹ Roe concluded that ". . . no support for the hypothesis could be drawn from these results."⁴²

In the studies by Grigg,⁴³ Hagen,⁴⁴ Utten,⁴⁵ Switzer,⁴⁶ and Roe and Siegelman⁴⁷ subjects were used who were of college and post-college age. These studies demanded retrospective recall by the subject of the parent-child relationship. All of these studies resulted, generally, in a failure to support Roe's general theory.

Grigg selected twenty-four registered female nurses who had returned to graduate school, and twenty graduate female students from

⁴¹Roe and Siegelman, A Study of the Origin . . ., p. 6.

⁴²Ibid.

⁴³Austin E. Grigg, "Childhood Experience with Parental Attitudes: A Test of Roe's Hypothesis," Journal of Counseling Psychology, VI, No. 2 (Summer, 1959), pp. 153-155.

⁴⁴Douglas Hagen, "Careers and Family Atmospheres: An Empirical Test of Roe's Theory," Journal of Counseling Psychology, VII, No. 4 (Winter, 1960), pp. 251-256.

⁴⁵Alden C. Utten, "Recalled Parent-Child Relations as Determinants of Vocational Choice," Journal of Counseling Psychology, IX, No. 1 (Spring, 1962), pp. 49-53.

⁴⁶David K. Switzer, Austin E. Grigg, Jerome S. Miller and Robert K. Young, Journal of Counseling Psychology, IX, No. 1, pp. 45-48.

⁴⁷Roe and Siegelman, A Study of the Origin . . ., pp. 4-7.

the departments of chemistry, physics, and mathematics who indicated a desire for research. A fifteen-item questionnaire designed to reflect parental reactions when the subject was a child was administered. No significant differences were found between the person oriented nurses and the non-person oriented research aspirants. Grigg implied the weakness of the retrospective technique by stating "it may be that a more sensitive test of Ree's hypothesis would be to obtain the responses from the parents rather than from [the] individuals"⁴⁸

Hagen used a group of male graduates as subjects. They had been intensively studied at Harvard College between 1938 and 1942, and were still being followed at the time of Hagen's study. After World War II, 245 subjects were contacted with a questionnaire designed to elicit work experiences, attitudes, and adjustments. One-hundred thirteen subjects responded. The results of the questionnaire were analyzed in relation to the histories of vocational, social, personal, and medical information collected from 1938 to 1942. Results proved to be negative when childhood family environments were related to the subject's present occupation. Hagen also found that, "the theory may also have failed because family atmosphere was inferred inadequately from the retrospective information which was available . . . memories of childhood were used and not the events themselves."⁴⁹

⁴⁸ Grigg, Journal of Counseling Psychology, VI, No. 2, p. 155.

⁴⁹ Hagen, Journal of Counseling Psychology, VII, No. 4, p. 256.

Utton used two groups of professional women as subjects. Thirty-three social workers and twenty-five occupational therapists represented the person orientation. Forty-one dietitians and twenty-eight laboratory technicians represented the non-person orientation. Two instruments were developed to test the hypothesis. The Childhood Experience Rating Scales were designed to measure "warmth" and to assist and structure the retrospective thinking of the subjects. The Parent Attitude Survey was constructed to measure "ignoring" and "possessive." Although the results showed that the person oriented subjects showed a greater altruistic love of people, there were no significant differences found between the two groups to support Roe's theory. In discussing his study Utton also noted that, "the limitations of the retrospective rather than a current observation approach were apparent from the beginning."⁵⁰

Switzer, et. al., selected 120 undergraduate and graduate male subjects for study. Forty ministerial students represented the person orientation, forty chemistry students represented the non-person orientation, and forty graduate theology students provided an indication of any change occurring following an increase in age and additional training. A two-scale questionnaire was constructed to measure each parent's attitudes towards the child on the dimensions of overdemanding and rejecting. Although differences were found between the perceived

⁵⁰ Utton, Journal of Counseling Psychology, II, No. 1, p. 51.

attitudes of fathers and of mothers, the results of the study failed to support Roe's hypothesis.⁵¹

Roe and Siegelman used the PGR on a sample of 142 male Harvard seniors, and two adult samples of forty-four engineers (twenty-two male and twenty-two female) and forty-four social workers (twenty-two male and twenty-two female). For the two male groups (Harvard and adult males) only Loving and Rejecting for father and Casual for mother were significant. For the two adult groups (engineers and social workers) only Loving and Rejecting for father and Reward Direct-Object for mother were significant. Roe's conclusion was that, "occupational choice, so far as these two occupations go engineering and social work, does seem to be a fair indication of personality pattern, as related to person-orientation, It is, however, much less accurate as an indication of past experience [parent-child relationship]."⁵² Roe also reported that, ". . . the major difficulty with this design is the use of retrospective reports."⁵³

Related Studies

The present study was confined to that stage of the vocational decision process which occurs at the seventh grade level (eleven to thirteen years of age). Therefore, literature related to this aspect of the research was also investigated.

⁵¹Switzer, Grigg, Miller, and Young, Journal of Counseling Psychology, IX, No. 1, pp. 45-48.

⁵²Roe and Siegelman, A Study of the Origin . . ., p. 29.

⁵³Ibid., p. 3.

Hall⁵⁴ suggested that grade groupings rather than age groupings would provide more discrete differentiation of those vocational behaviors and attitudes which are believed to change with age.

Selection of the seventh grade may be criticized on the basis that the vocational choice of such an early age group may be highly tenuous and potentially invalid. Ginzberg⁵⁵ in his general theory on occupational choice would note the seventh grade age group as leaving that stage called "fantasy" (up to eleven years of age) and entering that stage called "tentative" (eleven to seventeen years of age). According to Ginzberg, a child living within the fantasy period, ". . . believes that he can become whatever he wants to become. He makes an arbitrary translation of his impulses and needs into an occupational choice."⁵⁶ During the tentative period (ages eleven to seventeen) the child makes an ordered translation to occupational choice ". . . almost exclusively in terms of such subjective factors as his interests [which are dominant early in this period], capacities, and values."⁵⁷

⁵⁴Donald W. Hall, "The Vocational Development Inventory: A Measure of Vocational Maturity in Adolescence," Personnel and Guidance Journal, XLI, No. 9 (May, 1963), pp. 771-776.

⁵⁵Eli Ginzberg, Sol W. Ginsburg, Sidney Axelrad, and John L. Herma, Occupational Choice: An Approach to a General Theory (New York: Columbia University Press, 1951), p. 69.

⁵⁶Eli Ginzberg, "Toward a Theory of Occupational Choice," Occupations, XXX, No. 7 (April, 1952), p. 492.

⁵⁷Ibid., p. 493.

O'Hara and Tiedeman⁵⁸ supported Ginzberg's theory of the dominance of interests at this period. Peters and Van Atta's findings with eighth graders ". . . clearly demonstrate the vocational interests patterns are rather stable during the adolescent period."⁵⁹ O'Hara, in a study of first, third, fifth, seventh, and ninth grade boys reported that at the seventh grade ". . . reality more forcefully enters into the choice process."⁶⁰ He suggested that, ". . . the normal upper limit of fantasy choice [may be] at age 8 or 9 rather than 11."⁶¹ Thus, the individual seventh grader seems to be at a period of life at which he can actually evaluate himself as an entity.

Analysis of the studies by Ginzberg, et. al.,⁶² O'Hara and Tiedeman,⁶³ Peters and Van Atta,⁶⁴ and O'Hara,⁶⁵ suggested that the

⁵⁸R. P. O'Hara and B. V. Tiedeman, "Stages in the Development of Vocational Self Concept in Adolescence," Harvard Studies in Career Development, No. 7 (Cambridge, Massachusetts: Harvard Graduate School of Education, Harvard University, 1958, mimeographed), pp. 15-17.

⁵⁹Herman J. Peters and R. F. Van Atta, "The Shaping of Interests," Vocational Guidance Quarterly, IX, No. 1 (Autumn, 1960), p. 20.

⁶⁰R. P. O'Hara, "Talk About Self," Harvard Studies in Career Development, No. 14 (Cambridge, Massachusetts: Harvard Graduate School of Education, Harvard University, 1959, mimeographed), p. 5.

⁶¹Ibid., p. 11.

⁶²Ginzberg, et. al., Occupational Choice: . . ., p. 60.

⁶³O'Hara and Tiedeman, Harvard Studies in Career Development, No. 7, pp. 15-17.

⁶⁴Peters and Van Atta, Vocational Guidance Quarterly, IX, No. 1, p. 20.

⁶⁵O'Hara, Harvard Studies in Career Development, No. 14, pp. 5 and 11.

seventh grader, aged eleven to thirteen years, is probably not only in touch with reality but will evidence behaviors based upon perceptions of reality. It would appear that the seventh grade child may represent that temporary entity in which needs merge with interests to guide occupational choice in a direction which is most meaningful to the individual. It may be pertinent, when debating the use of this age group, to consider Arbuckle's admonition to not take too literally the so-called "fantasy" stage. "I sometimes wonder if the so-called fantasy of his [the young child] occupational dreams is possibly a good deal less fantastic than the occupational future that concerned adults are planning for him."⁶⁶

Having established the selection of the seventh grade, the next problem was to determine whether the child or the parent should report the relationship. The answer to ". . . the question of who shall report is predetermined by the theory."⁶⁷ Since Roe's theory is predicated upon the parent-child relationship as perceived and internalized by the child, it was felt that the children should report their feelings rather than the parents. For, as Hoffman and Lippett have noted, ". . . perhaps attitudes as reported by parents and as perceived by their children are different phenomena. It is also possible that parent attitudes and practices as reported by parents are significantly

⁶⁶Dugald Arbuckle, "Occupational Information in the Elementary School," Vocational Guidance Quarterly, XII, No. 2 (Winter, 1963-64), p. 83.

⁶⁷L. W. Hoffman and R. Lippett, "The Measurement of Family Life Variables," in Paul H. Mussen, editor, Handbook of Research Methods in Child Development (New York: John Wiley and Sons, 1960), p. 995.

discrepant from actual parent-behavior patterns. . . ."⁶⁸ Helper,⁶⁹ in his study of parental versus junior high school children's evaluation of the dimensions of favorability and acceptance of the child also supported the thesis that children's reports may actually be more accurate measures than those of the parents.

Summary and Conclusions

From the analysis of the five studies of Roe's hypothesis, it was apparent that the general consensus of those who tested Roe's theory was that retrospective recall of the parent-child relationship may have been the critical factor in their failure to support the theory.

Related studies indicated that the choice process is operative at ages eleven through seventeen. Specific studies noted that the seventh grade, and ages eleven to thirteen, represented a significant area for study.

On the basis of this literature, the present investigator felt that valid reporting of the parent-child relationship could only be obtained while that relationship was being experienced in on-going situations. Accordingly, the junior high school level was selected as one age at which children are experiencing on-going parent-child relationships. Evidences found within the related literature indicated

⁶⁸Ibid., p. 973.

⁶⁹Malcolm M. Helper, "Parental Evaluation of Children and Children's Self-Evaluations," Journal of Abnormal and Social Psychology, LVI, No. 2 (March, 1958), pp. 190-194.

that the reporting seventh grade child would provide the best synthesis of the following factors: reduction of retrospective recall; an ability to perceive and report experiences; and contact with reality in regard to vocational choice.

Chapter III will describe the investigative procedures employed in this study.

CHAPTER III

METHOD

Selection of the Sample

In the school year 1961-1962, a state-wide program tested 29,000 seventh grade students in Oklahoma. As part of the program, the YEP⁷⁰ was used to elicit occupational choice, educational plans, and role models influencing the decisions of seventh graders. The subjects for the current study were drawn from this larger sample studied by Parker.⁷¹

Three of the original three-hundred seventy-three schools in the state of Oklahoma were selected for the present study: Chickasha, Ada, and Miami Junior High Schools. These schools were selected because:

1. The Assistant Superintendent in Charge of Instruction, State Department of Education, Oklahoma, regarded these schools as representative of the state as a whole.

⁷⁰ Your Educational Plans, a Questionnaire (Chicago, Illinois: Science Research Associates, 1960).

⁷¹ Harry J. Parker, "Right or Wrong -- 29,000 Seventh Graders Have Made Occupational Choices," Vocational Guidance Quarterly, II, No. 1 (Autumn, 1962), pp. 54-55.

2. In addition to being representative, these schools provided large individual samples of boys and girls.
3. They included different socio-economic variables affecting the parents and thus the students. For example: none was an impoverished area; each presented a wide base of activity in industry and business; there existed only a four to five per cent unemployment factor, which is normal for the state.
4. They provided an approximately balanced sample of boys and girls.
5. They provided a high level of research cooperation.

The testing questionnaire (PCR) was administered to the seventh grade students of each of these schools. Of the 475 students who were administered the PCR, a usable sample of 355 was obtained for study, resulting in 205 boys and 155 girls.

PCR Questionnaire

A slightly modified Roe-Siegelman Parent-Child Relations Questionnaire⁷² (PCR) was used as the testing instrument (See Appendix II). Modification of the original questionnaire consisted of a change of tense in each item, from past to present, to elicit on-going perceptions plus a change in word difficulty, where appropriate, to more nearly equate item content with seventh grade vocabulary.⁷³ (See Appendix V for changes.)

⁷²Roe and Siegelman, A Parent-Child Relations. . . .

⁷³Substituted words were taken from Irving Lorge and Edward L. Thorndike, The Teacher's Word Book of 30,000 Words (New York: Teachers College, Columbia University, 1944).

The original questionnaire was devised by Roe and Siegelman to obtain some measure of the characteristic behavior of parents towards their young children, as experienced by the child. There are separate questionnaires of 130 items each for mother and father. The 130 items are divided into ten subtests, six of fifteen items each for behavior characterized as Protecting, Demanding, Rejecting, Neglecting, Casual, and Loving; and four subtests of ten items each for Reward Symbolic-Love, Reward Direct-Object, Punishment Symbolic-Love, and Punishment Direct-Object. (See Appendix IV for definitions of ten behavioral constructs.⁷⁴) The constructs for Reward and Punishment follow the work of Sears, Maccoby, and Levin.⁷⁵

Validity

Content validity was obtained by Roe from inter-judge agreement on items. A large number of items were extracted or adapted from the literature, and others were constructed to fit the ten categories. These items were submitted to Roe's colleagues⁷⁶ with descriptions of the categories. Each judge independently assigned each item to a category, or discarded it. All of the items finally included in the

⁷⁴ Anne Roe and Marvin Siegelman, "A Parent-Child Relations Questionnaire," Child Development, XXXIV, No. 2 (1963), p. 357.

⁷⁵ Robert R. Sears, Eleanor E. Maccoby, and Harry Levin, Patterns of Child Rearing (New York: Row Peterson and Company, 1957), pp. 318, 319, 341.

⁷⁶ Isidore Chein, Barbara Dohrenwend, Murray Horowitz, and Claire Sellitz.

questionnaire were those which were assigned to the same category by all of the judges; and the same items were originally used for both parents.

A further study of the PCR on a casual sample of twenty-six male college students was conducted. A computation of reliabilities and item analysis led to a modification of the original questionnaire so that at present there are eleven items which are different for the two parents (items 24, 26, 31, 54, 61, 64, 74, 81, 91, 113, and 122).

The PCR factors were considered satisfactory by Roe in that they ". . . seem satisfyingly similar to factors derived in a number of studies of parent attitudes in which the parents themselves served as subjects."⁷⁷ For example, the factors of Love-Hostility and Autonomy-Control found by Shaefer,⁷⁸ the factors Love-Hate and Dominance-Submission found by Friedman, et. al.,⁷⁹ and the factors of Emotional Supportiveness, Warmth, and Inhibitory Demands and Discipline found by Slater,⁸⁰ all seem to parallel the similar behaviors described in the PCR.

⁷⁷Roe and Siegelman, A Parent-Child Relations . . ., p. 2.

⁷⁸E. S. Shaefer, "Converging Conceptual Models for Maternal Behavior and for Child Behavior," paper read at the Conference on Research on Parental Attitudes and Child Behavior, Washington University, St. Louis, Missouri, March 4-5, 1960, cited in Roe and Siegelman, A Study of . . ., p. 2.

⁷⁹M. Friedman, T. Leary, A. Ossorio, and H. Coffey, "The Interpersonal Dimensions of Personality," Journal of Personality, XI, No. 1 (September, 1951), pp. 143-161.

⁸⁰P. E. Slater, "Parent Behavior and the Personality of the Child," (unpublished), cited in Roe and Siegelman, A Study of . . ., p. 3.

It was assumed that the modification of the original questionnaire by tense would not change its validity. It was further assumed that a reduction in word difficulty would enhance the quality of response of the seventh grader and not change the validity. These assumptions were supported by Roe.⁸¹

Reliability

The reliability of each subtest of Roe's original questionnaire are shown in Table 2.⁸²

TABLE 2
PCR SUBTEST RELIABILITIES FOUND BY ROE

PCR Subtest	Harvard Sample	
	Mother	Father
Loving	.872	.896
Protecting	.761	.780
Casual	.800	.810
Rejecting	.759	.850
Neglecting	.745	.868
Demanding	.836	.826
Reward S-I	.708	.757
Reward D-O	.798	.783
Punishment S-I	.759	.687
Punishment D-O	.769	.788

The reliability of each subtest in each of the four configurations (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers) was computed, for the present study, by using an item analysis technique

⁸¹Letter from Dr. Anne Roe, Harvard Graduate School of Education, Harvard University, Cambridge, Massachusetts, 3 March, 1964. (See Appendix VIII for pertinent excerpts.)

⁸²Roe and Siegelman, A Parent-Child Relations . . . , p. 6.

of Tryon.⁸³ The specific formula is labeled Variance Form,⁸⁴ and is shown as:

$$R = \left[\frac{n}{n - 1} \right] \left[1 - \frac{\sum S_i^2}{S_x^2} \right]$$

n = number of items

S_i^2 = variance of each item

S_x^2 = total variable variance

$S_x^2 = \frac{\sum x^2}{N} - \frac{(\sum x)^2}{N}$, where N is the number of subjects

Administration of Questionnaire

All seventh grade students present in school on the day of the test were administered the modified PCR. All testing at any one school was completed during one school day.

The directions called for students to state if they lived with their real mother and father at home. If not, students were directed to name the adult surrogate figures present in the home. Thus, step-parent, foster-parent, grand-parent, uncle, aunt, big sister or big brother were so indicated on the answer sheet of the student experiencing this type of "parent" influence. All of those student questionnaires which did not show the family to be of blood-related, cohabitating, natural parents living without a third "parent" were discarded.

⁸³R. C. Tryon, "Reliability and Behavior Domain Validity: Reformulation and Historical Critique," *Psychological Bulletin*, LIV, No. 3 (1959), pp. 229-249. See also: "Cronback's Alpha," in J. P. Guilford, *Psychometric Methods* (New York: McGraw-Hill, 1954), p. 385.

⁸⁴Tryon, *Psychological Bulletin*, LIV, No. 3, p. 232.

For purposes of this study, only a natural parent relationship was to be studied. Therefore, it was felt that the parent-child relationship could be studied only if the family existed as a unit without any diversionary "parental" forces operative. This contention was supported by Roe's statement concerning her study with the PCR and the Harvard and adult samples. Roe stated: "No attempt was made to hold to any requirement of the presence of both parents during the childhood of the subject . . . this may be an important variable."⁸⁵

Scoring of Questionnaire

Scoring of the PCR was a replication of Roe's system. Each item on each completed questionnaire marking sheet was scored and arrayed for summation as shown in Appendix VII, one sheet for mothers and another for fathers. Each item received a score of one to five, depending on the response to the item question.⁸⁶ All scores carried a positive value, with no negative value scores possible. A low total score for any one subtest indicated a subject did not perceive that parent-behavioral relationship. A high total score for any one subtest indicated a subject did perceive that parent-behavioral relationship to a marked degree. Any middle score would lie in a relative position between the two extremes.

⁸⁵Roe and Siegelman, A Study of the Origin . . . , p. 12.

⁸⁶Scores assigned responses were: One for a response of "Very Untrue," two for a response of "Seems Untrue," three for a response of "Sometimes Untrue Sometimes True," four for a response of "Seems to be True," and five for a response of "Very True."

The possible range of scores for any one subject on each fifteen-item subtest for Protecting, Loving, Casual, Neglecting, Rejecting, and Demanding was between fifteen and seventy-five. The possible range of scores for any one subject on each ten-item subtest for Reward Symbolic-Love, Reward Direct-Object, Punishment Symbolic-Love, and Punishment Direct-Object was from ten to fifty.

For the occupational choice given by each subject, a coding sheet (See Appendix VIII) was made for IBM card punch classification and analysis in accordance with Roe's schema.⁸⁷

Each of the 355 subjects was tabulated on a single IBM card. Each card was coded to show sex, total score attained on each of the ten subtests for the perception of mother, total score attained on each of the ten subtests for father, and occupational choice. These 355 cards were used in an IBM 1410 computer for statistical analysis of the data.

Additionally, each subject's individual score on each item was tabulated on another set of IBM cards (four cards per subject). This set of cards was used in an IBM 1410 computer to test specifically for reliability by item analysis.

Statistical Treatment of Data

The scores of each individual on each item for mother and for father, plus each individual's total score on each of the PCR subtests for mother and father were used for statistical analysis. These scores

⁸⁷Roe, The Psychology of Occupations See Appendix III for a brief description and some examples of occupations for each classification.

were analyzed by dichotomizing all subjects on choice of occupation as having selected either towards person occupations or towards non-person occupations.⁸⁸

Test for Normality of Distributions

To determine the appropriateness of the t test of significance (hereinafter referred to as t), and the F test for homogeneity of variance (hereinafter referred to as F), two techniques were applied to the data.

1. A Chi Square (X^2) test for normality, using the .01 level of significance, was computed for each of the PCR subtests in each of the four parent-child pairings (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers).
2. Frequency distributions were made for those PCR subtests for which the hypothesis of normality was rejected by the X^2 test. Frequency distributions were inspected to determine if the data met Guilford's criteria for the use of parametric statistics,⁸⁹ i. e., distributions should not be abnormally skewed, distributions should be fairly symmetrical, and distributions should be unimodal.

Additional support for the use of these parametric statistics was found in a statement made by Walker and Lev, to the effect that

⁸⁸See Appendix III for classification of occupations as towards person occupations and towards non-person occupations.

⁸⁹J. P. Guilford, Fundamental Statistics in Psychology and Education, 3rd edition (New York, McGraw-Hill, 1956), p. 156.

"studies indicate that some departure from normality does not invalidate the methods [of t and F]" ⁹⁰

A Chi Square (χ^2) test for normality was used for each distribution of total scores on each PCR subtest in each of the four configurations. The criterion for observed cases for each class interval along the distribution curve was established at two. ⁹¹ The criterion for expected cases in each class interval along the distribution curve was established from Carnahan, et al., i. e., the value $\chi^2 = \frac{(fo - fe)^2}{fe}$ ". . . is only approximately distributed as χ^2 ;

however, it is almost exactly distributed as χ^2 if every expected frequency is greater than twenty. ⁹² The number of boys and girls in the present study permitted acceptance of this criterion.

Insuring twenty expected cases for each class interval for the PCR subtests for boys ($n = 205$) was accomplished as follows:

1. An n of 205, with at least 20 cases per class interval demanded at most 10 class intervals.
2. That value of 205 cases which provided for at least 20 cases was .096 or 0.1.
3. From a table of standard z scores that value of z was determined which encompassed 0.1 of the area of the curve

⁹⁰Helen M. Walker and Joseph Lev, Statistical Inference (New York: Holt, Rinehart, and Winston, 1953), p. 143.

⁹¹Guilford, Fundamental Statistics . . . , p. 241.

⁹²Brice Carnahan, H. A. Luther, and James O. Wilkes, Applied Numerical Methods, preliminary edition, Volume II (New York: John Wiley and Sons, 1964), p. 698.

from the mean. This process was extended outward on the curve until each z value was found which encompassed each additional 0.1 of the area under the curve. Five class intervals were determined. This process was repeated for the area of the curve to the left of the mean. The constant z values were: ± 0.26 ; ± 0.53 ; ± 0.85 ; and ± 1.29 .

4. The standard deviation of each PCR subtest for boys was then multiplied by the z constants in step three. The resulting values were then added to, or subtracted from, the mean value for that particular PCR subtest. This established the PCR score limits which encompassed at least twenty expected cases in each of the ten class intervals.

5. The total χ^2 value for each distribution was computed by:

$$\chi^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

6. Significance was determined using degrees of freedom equal to the number of class intervals minus three;⁹³ or
 $10 - 3 = 7 \text{ d.f.}$

Insuring twenty expected cases for each class interval for girls ($n = 150$) was accomplished as follows:

1. An n of 150, with at least 20 cases per class interval demanded at most 7 class intervals.

⁹³Guilford, Fundamental Statistics . . . , p. 241.

2. Since there were an odd number of class intervals, it was decided to have the middle class interval contain the greatest number of cases.
3. Fulfillment of the criterion in step two dictated starting the determination of class interval limits from both tails, rather than from the means, as was done with the boys.
4. The value of 150 cases which provided at least 20 cases was 0.133.
5. From a table of standard z scores that value of z was determined which left 0.133 area of the curve in the tail. Next, that z value which encompassed 2×0.133 area of the curve was determined. Finally, that z value which encompassed 3×0.133 area of the curve was determined. The constant z values were: ± 0.25 ; ± 0.62 ; and ± 1.11 .
6. The standard deviation of each PCR subtest for girls was then multiplied by the z constants in step five. The resulting values were then added to, or subtracted from, the mean value for that particular PCR subtest. This established the PCR score limits which encompassed at least twenty expected cases in each of the seven class intervals.
7. The total X^2 value for each distribution was computed by:

$$X^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$
8. Significance was determined, using degrees of freedom equal to the number of class intervals minus 3;⁹⁴ or,

$$7 - 3 = 4 \text{ d.f.}$$

⁹⁴
Ibid.

PCR Subtest Interrelation

To determine the extent to which the PCR subtests were measuring discrete behaviors, four Pearson product-moment intercorrelational matrices were computed (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers). Additionally, these matrices provided statistical support for formulating hypotheses seven through twelve.

An unbiased form of the basic formula for a Pearson product-moment coefficient of correlation was used:⁹⁵

$$r_{xy} = \frac{\sum_{i=1}^N (X_i - \bar{X})(Y_i - \bar{Y})}{(N - 1)(s_x s_y)} = \frac{\sum_{i=1}^N (X_i Y_i - N \bar{X} \bar{Y})}{(N - 1) s_x s_y}$$

N = total number of scores

s_x and s_y = standard deviation of distributions x and y

X_i and Y_i = any one score in X and Y distributions

\bar{X} and \bar{Y} = means of X and Y distributions

PCR Inter-Parent Correlation

To determine the degree to which boys and girls in the present study perceived their parents as separate entities, two inter-parent correlations, one for boys and one for girls, were computed for each PCR subtest. Correlations were sought to determine if the subjects of the present study showed an equal or a greater degree of "halo effect" in their perceptions of their parents than did Roe's Harvard

⁹⁵ Wm. W. Cooley and Paul Lohnes, Multivariate Procedures in Behavioral Sciences (New York: John Wiley, 1962).

sample. The same coefficient of correlation formula used for subtest intercorrelations was used for the inter-parent correlations.

Statistical Tests for Hypotheses One Through Ten

Support for Roe's theory would be obtained if the mean score of those subjects selecting towards person occupations was significantly higher on those PCR subtests defined as person oriented relationships than those subjects selecting towards non-person occupations, i. e., on Protecting, Casual, Loving, Reward Direct-Object, and Reward Symbolic-Love. Roe's theory would also gain support if the mean score of those subjects selecting towards non-person occupations was significantly higher on those PCR subtests defined as non-person oriented relationships than those subjects selecting towards person occupations, i. e., on Rejecting, Neglecting, Demanding, Punishment Direct-Object, and Punishment Symbolic-Love.

To test for the appropriateness of the t test, an analysis of variance was made. Homogeneity of the variances on each PCR subtest in each of the four configurations of those subjects indicating person occupations and those subjects indicating non-person occupations was tested by the F test:⁹⁶

$$F = \frac{s_1^2}{s_2^2}$$

s_1^2 = larger variance

s_2^2 = smaller variance

⁹⁶Walker and Lev, Statistical Inference, p. 140.

Unbiased variance⁹⁷ was computed for use in the F test:

$$s^2 = \left(\frac{1}{n-1} \right) \sum_{i=1}^n (X_i - \bar{X})^2 = \frac{\sum_{i=1}^n X_i^2 - n \bar{X}^2}{n-1}$$

X_i = individual scores

\bar{X} = mean

n = number scores

If the F test was not significant, t was computed by the following formula:⁹⁸

$$\bar{X}_1 - \bar{X}_2$$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sum \sum X^2 - \frac{(\sum X_1)^2}{n_1} - \frac{(\sum X_2)^2}{n_2}}{n_1 + n_2 - 2}} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

\bar{X} = mean number of scores

$$\text{d.f.} = n_1 + n_2 - 2$$

If the F test was significant, t was computed by the following formula for uncorrelated means:⁹⁹

⁹⁷ Ibid., p. 119.

⁹⁸ A. Hald, Statistical Theory with Engineering Applications

⁹⁹ Ibid., pp. 397-398.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

$$\text{with: } \frac{1}{d.f.} = \frac{c^2}{d.f._1} + \frac{(1-c)^2}{d.f._2}$$

$$c = \frac{\frac{s_1^2}{n_1}}{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

\bar{x} = mean

s^2 = variance

d.f. = degrees of freedom

n = number subjects

Statistical Test for Hypotheses Eleven Through Sixteen

These six hypotheses are based upon selected combinations of PCR subtests. These combinations were derived from a logical adaptation of Roe's theory. If Roe's theory is valid, then various combinations of positive behavior (Protecting, Casual, Loving, Reward Symbolic-Love, and Reward Direct-Object) should operate in conjunction to provide a more powerful incentive in the direction of towards persons occupations. The same could be said about various combinations of the negative behavior (Rejecting, Neglecting, Demanding, Punishment Symbolic-Love, and Punishment Direct-Object) providing the incentive for an orientation towards non-persons occupations.

Combining certain PCR subtests in a logical manner will provide a total parent-child relationship of either a positive or a negative nature. These combinations can then be tested by the F and t tests. The same conditions established for hypotheses one through six regarding F , and the appropriateness of the t test will pertain for hypotheses eleven through sixteen. Additionally, to cross-check the validity of the basic assumption that these PCR subtests can, in fact, be combined behaviorally, a median χ^2 test will also be computed. It is desired to determine, by the χ^2 test, whether the subjects actually dichotomized on selection of a person occupation to a greater degree than could be expected by chance.

The subjects were dichotomized on both occupational selection and whether their cumulative score on the PCR subtest combinations fell above or below the median; those falling on the median were omitted from consideration. The 2×2 matrices for the various selected combinations followed the design shown in Figure 2.

	Subjects Selecting Person Occupations	Subjects Selecting Non-Person Occupations
Subjects Above The Median		
Subjects Below The Median		

FIGURE 2

SAMPLE MATRIX FOR VARIOUS SELECTED
PCR SUBTEST COMBINATIONS

In consideration of any one PCR subtest combination, the following applies:

1. Roe's theory is supported by those person oriented PCR subtest combinations if the observed frequency of those subjects above the median who selected person occupations was significantly different from the expected frequency.
2. Roe's theory is supported by those non-person oriented PCR subtest combinations if the observed frequency of those subjects above the median who selected non-person occupations was significantly different from the expected frequency.

The formula used to compute χ^2 was:

$$\chi^2 = \frac{(fo - fe)^2}{fe}$$

fo = observed frequency

fe = expected frequency

Supportive Data for Hypothesis Seventeen

Visual comparisons of each PCR subtest interparent correlation determined disparities. Such comparisons were made on each subtest of the PCR for Roe's Harvard sample and for the present sample. Disparities between the two samples were noted. A "sign test"¹⁰⁰ was computed to determine the level of confidence of the results.

¹⁰⁰

Guilford, Fundamental Statistics . . . , pp. 248-249.

Summary

This chapter discussed the selection of the sample, the PCR questionnaire and its use, and the statistical treatment of the derived data.

Chapter IV will present an analysis of all the data obtained, to support or to reject the hypotheses formulated in Chapter I.

CHAPTER IV

RESULTS

Investigation of Appropriateness of Using Parametric Statistics

The tests for normality of distributions (see Chapter III, page 36) showed that thirty of the forty PCR subtests were not statistically significant. The hypothesis of normality was accepted for these thirty tests. Table 3 gives the cumulative χ^2 of normality. The computational data used to determine these values are contained in Appendix IX.

Table 4 lists, by parent-child pairing (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers), those PCR subtests for which the hypothesis of normality was rejected at the .01 level of significance. Appendix X contains the frequency distributions of the ten PCR subtests for which the statistical null hypothesis of normality was rejected. Inspection of the frequency distribution in Appendix X revealed that the distributions approximate Guilford's criteria¹⁰¹ for use of the parametric statistics.

¹⁰¹
Ibid.

TABLE 3

CUMULATIVE CHI SQUARE VALUES^a FOR EACH PCR SUBTEST
IN EACH CONFIGURATION TO DETERMINE
DISTRIBUTION NORMALITY

PCR Subtest	Boys		Girls	
	Mothers	Fathers	Mothers	Fathers
Protecting	5.063	14.595	3.597	10.126
Punishment S-I	41.425 ^b	36.080 ^b	7.582	7.271
Rejecting	6.671	16.047	7.235	12.978 ^b
Casual	14.598	15.898	5.627	1.039
Reward S-I	14.774	5.923	9.234	3.566
Demanding	7.624	8.989	8.960	4.779
Punishment D-O	14.451	15.098	3.234	11.298
Loving	5.764	5.517	14.366 ^b	11.997 ^b
Neglecting	36.689 ^b	26.073 ^b	14.344 ^b	12.605 ^b
Reward D-O	27.795 ^b	9.439	2.860	4.457

$$\chi^2 = \frac{\text{Boys}}{16.622} \quad \frac{\text{Girls}}{11.668}$$

^b Statistical null hypothesis of no difference between normalities rejected.

TABLE 4

PCR SUBTESTS STATISTICALLY SIGNIFICANT
AT THE .01 LEVEL

Boys		Girls	
Mothers	Fathers	Mothers	Fathers
Punishment S-L	Punishment S-L	Loving	Loving
Neglecting	Neglecting	Neglecting	Neglecting
Reward D-O			Rejecting

PCR Subtest Ranges, Means,
and Standard Deviations

To assist in comparing the PCR subtests, and for descriptive purposes, ranges, means, and standard deviations were computed for each PCR subtest in each of the four configurations (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers). Table 5 lists these values.

Reliability

An item analysis technique of Tryon,¹⁰² using the Variance Form¹⁰³ was used to compute reliability. Results for each PCR subtest in each of the four configurations (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers) are contained in Table 6.

¹⁰² Tryon, Psychological Bulletin, LIV, No. 3, pp. 229-249.

¹⁰³ Ibid.

TABLE 5

PCR RANGES, MEANS, AND STANDARD DEVIATIONS

PCR Subtest	Statistic	Boys (n=205)		Girls (n=150)	
		Mothers	Fathers	Mothers	Fathers
Pro.	Range	24-59	25-61	24-63	23-63
	Mean	40.980	42.019	43.580	45.886
	S.D.	6.790	7.358	6.438	7.259
Pun.S-I	Range	14-42	12-50	15-42	14-42
	Mean	26.697	26.068	26.120	24.713
	S.D.	5.037	5.686	5.731	5.698
Rej.	Range	16-61	15-62	17-53	15-63
	Mean	30.843	32.419	28.360	28.980
	S.D.	8.215	8.956	7.916	9.023
Cas.	Range	27-59	23-59	25-57	26-59
	Mean	41.682	41.507	41.906	40.620
	S.D.	6.594	6.731	6.127	6.936
Rev.S-I	Range	16-50	13-50	14-47	10-49
	Mean	33.580	32.658	34.533	33.480
	S.D.	6.144	6.749	5.543	6.290
Ben.	Range	27-66	27-66	27-65	25-64
	Mean	45.624	47.634	44.426	45.553
	S.D.	6.998	6.830	7.029	7.635
Pun.D-0	Range	10-45	10-47	12-42	10-39
	Mean	25.253	26.448	22.893	23.220
	S.D.	5.699	6.993	5.555	6.638
Lov.	Range	34-75	15-75	18-75	15-75
	Mean	57.014	54.882	59.040	57.226
	S.D.	8.715	9.996	9.152	9.796
Neg.	Range	15-52	15-54	15-58	15-66
	Mean	27.298	30.814	25.513	25.560
	S.D.	7.779	9.155	7.335	8.247
Rev.D-0	Range	10-48	10-49	12-48	10-48
	Mean	28.351	28.000	28.746	28.493
	S.D.	6.785	6.894	6.486	6.686

TABLE 6
PCR SUBTEST RELIABILITIES FOR THE SAMPLE

PCR Subtest	Boys		Girls	
	Mothers	Fathers	Mothers	Fathers
Loving	.818	.820	.853	.876
Protecting	.596	.613	.626	.638
Casual	.584	.640	.593	.620
Rejecting	.761	.800	.807	.826
Neglecting	.774	.809	.809	.863
Demanding	.619	.635	.589	.587
Reward S-L	.722	.746	.769	.803
Reward D-O	.768	.804	.789	.796
Punishment S-L	.504	.531	.629	.678
Punishment D-O	.640	.666	.790	.797

The range of reliabilities was from .504 to .876. All the reliabilities compared favorably with those reported by Roe¹⁰⁴ (see Table 2) and were considered to be sufficiently high for purposes of this study.

Hypotheses One Through Ten

Male and female subjects were dichotomized on each PCR subtest in each of the four configurations (Boys-Mothers, Boys-Fathers, Girls-Mothers, Girls-Fathers). The dichotomy was determined by the subject's

¹⁰⁴Roe and Siegelman, A Parent-Child Relations . . . , p. 6.

selection of either a person occupation or a non-person occupation. Table 7 shows the number of boys and the number of girls who selected either person or non-person occupations. In the case of boys, 117 out of 205 selected non-person occupations. In the case of girls, 113 out of 150 selected person occupations. The disparity existing between the occupational selections may be partially explained by two complementary factors. One, the zeitgeist existing in our culture seems to dictate the pursuit of science and technology for boys. Two, sex role identification seems to divert girls from a career in science and technology.

Using the above dichotomy, mean scores and variances were computed for each of the two groups, on each PCR subtest in each of the four configurations. Table 7 contains the values of these means and variances.

Variances were used to compute an F ratio to establish the appropriateness of the t test. The appropriate t test was used to determine if any statistically significant differences existed between the means of the two groups. Table 8 and Table 9 contain those values of t and F associated with each PCR subtest. These values were used to accept or reject the statistical null hypothesis of no differences existing between the variances or means of the two groups under study, i. e., the person occupation group and the non-person occupation group. The .05 level was used to establish the significance of F's and t's.

TABLE 7

MEANS AND VARIANCES OF EACH PCR SUBTEST IN EACH CONFIGURATION FOR SUBJECTS SELECTING
PERSON OCCUPATIONS AND SUBJECTS SELECTING NON-PERSON OCCUPATIONS

PCR Subtest	Towards Person or Non-Person Occupation	Boys ^a				Girls ^b			
		Mothers		Fathers		Mothers		Fathers	
		\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2
Pro.	P	42.466	49.608	43.614	59.550	43.672	39.472	46.097	53.285
	NP	39.863	40.947	40.820	47.183	43.297	48.659	45.243	51.634
Pan.S-L	P	27.341	29.055	26.409	26.428	25.805	29.837	24.239	30.576
	NP	26.214	22.290	25.812	37.895	27.081	41.854	26.162	36.417
Rej.	P	31.341	82.342	33.125	85.214	27.876	63.770	28.026	82.080
	NP	30.470	56.613	31.889	76.513	29.838	58.029	31.892	70.044
Cas.	P	43.159	36.940	43.477	32.390	42.168	33.712	40.752	50.277
	NP	40.573	45.885	40.026	50.232	41.108	49.655	40.216	42.508
Row.S-L	P	34.136	34.648	33.261	47.919	34.451	31.803	33.716	39.240
	NP	33.162	39.999	32.205	43.682	34.784	28.174	32.757	38.411
Dem.	P	45.750	56.718	47.693	52.882	43.841	47.742	44.681	53.844
	NP	45.530	43.579	47.590	42.382	46.216	51.618	48.216	64.119
Pun.D-O	P	25.739	37.575	26.909	51.072	22.539	30.654	22.779	46.924
	NP	24.889	28.634	26.102	47.420	23.811	31.213	24.568	33.919
Lov.	P	56.545	74.343	54.614	102.332	59.380	90.488	57.973	100.848
	NP	57.368	76.528	55.085	98.906	58.000	63.722	54.946	76.386
Neg.	P	28.193	72.502	31.989	86.402	24.920	55.770	27.026	73.365
	NP	26.624	50.995	29.932	80.771	27.324	44.725	29.189	49.658

TABLE 7 -- Continued

PCR Subtest	Towards Person or Non-Person Occupation	Boys ^a				Girls ^b			
		Mothers		Fathers		Mothers		Fathers	
		\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2
Row.D-O	P	29.500	46.161	29.182	45.369	38.814	41.170	28.469	48.626
	NP	27.487	44.597	27.111	47.720	28.540	45.978	28.568	33.752

^a Person n = 88
Non-person n = 117

^b Person n = 113
Non-person n = 37

TABLE 8
VALUES OF \underline{t} AND F FOR BOYS
(N = 205)^a

PCR Subtest	Mothers		Fathers	
	\underline{t}^b	F ^c	\underline{t}^b	F ^c
Protecting	2.760	1.212	2.732	1.262
Punishment S-L	1.591	1.303	.743	<u>1.396</u>
Rejecting	.728 ^d	1.454	.978	1.114
Casual	2.827	<u>1.242</u>	3.868 ^e	<u>1.551</u>
Reward S-L	1.124	1.154	1.109	1.097
Demanding	.222	1.302	.107	<u>1.248</u>
Punishment D-O	1.057	1.312	.817	1.077
Loving	-.668 ^f	<u>1.043</u>	-.334 ^f	1.035
Neglecting	1.398 ^d	1.422	1.598	1.070
Reward D-O	2.120	1.035	2.147	<u>1.052</u>

^a88 boys selected person occupations; 117 selected non-person occupations.

^bSignificant \underline{t} at .05 level, with 203 d.f. = 1.972.

^cWhen the variance of those selecting person occupations is greater than the variance of those selecting non-person occupations, the value of F which is significant at the .05 level = 1.385. When the reverse situation exists, i. e. non-person variance greater than person variance, F = 1.410.

^dSignificant \underline{t} at .05 level, with 166.7 d.f. = 1.977.

^eSignificant \underline{t} at .05 level, with 200 d.f. = 1.972.

^fAll negative value \underline{t} 's indicate non-person mean is greater than person mean.

TABLE 9

VALUES OF \underline{t} AND F FOR GIRLS
(N = 150)^a

PCR Subtest	Mothers		Fathers	
	\underline{t}^b	F ^c	\underline{t}^b	F ^c
Protecting	.307	1.233	.620	1.032
Punishment S-L	-1.177 ^d	<u>1.403</u>	-1.795 ^d	<u>1.191</u>
Rejecting	-1.311 ^d	1.099	-2.294 ^d	1.172
Casual	.913	<u>1.472</u>	.407	1.183
Reward S-L	- .316 ^d	1.129	.811	1.022
Demanding	-1.797 ^d	<u>1.081</u>	-2.486 ^d	<u>1.191</u>
Punishment D-O	-1.159 ^d	<u>1.018</u>	-1.428 ^d	1.383
Loving	.795	1.420	1.641	1.320
Neglecting	-1.742 ^d	1.247	-1.389 ^d	1.477
Reward D-O	.222	<u>1.117</u>	- .077 ^d	1.441

^a113 girls selected person occupations; 37 selected non-person occupations.

^bSignificant \underline{t} at .05 level with 148 d.f. = 1.976.

^cWhen the variance of those selecting person occupations is greater than the variance of those selecting non-person occupations, the value of F which is significant at the .05 level = 1.606. When the reverse situation exists, i. e. non-person variance greater than person variance, F = 1.410.

^dAll negative value \underline{t} 's indicate non-person mean greater than person mean.

Hypothesis One

The first hypothesis stated that children experiencing a Loving relationship in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, was used with the Loving PCR subtest in the four configurations.

There were no significant mean differences found for any of the parent-child pairings. Therefore, the first hypothesis was not confirmed.

Failure of the Loving scale to support Roe's theory was unexpected. It was thought that of all the scales, Loving would be one of the most powerful.

In every one of the four configurations the mean score for Loving was the highest (see Table 5 and Table 7). However, this scale also showed the greatest variance (see Table 7).

A possible explanation of the scale's failure to support the theory can be gained from Grigg: "With a questionnaire, there is the possibility that social desirability may influence the response to some of the foils."¹⁰⁵ It may be that even the seventh grader is sophisticated and perceptive enough to see the social desirability of having loving parents.

Another possible explanation may be that Loving, as a dimension of the parent-child relationship, is not as relevant to occupational choice as had been theorized. Roe noted that a Loving relationship

¹⁰⁵ Grigg, Journal of Counseling Psychology, VI, No. 2, p. 154.

" . . . might give the child enough satisfaction of needs for relatedness and without emphasis, so that his development would depend more on capacities than on environmental pressures."¹⁰⁶ Apparently, if a child has a Loving parental relationship this may give to the individual that freedom to pursue his life's course in any number of ways -- in either a towards person or towards non-person occupation. If the Loving environment is in effect, it has relatively little influence upon occupational choice; it is, rather, its absence which is most important.

Hypothesis Two

The second hypothesis stated that children experiencing a Protecting relationship in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, was used with the Protecting PCR subtest in the four configurations.

There were significant mean differences found for the Boys-Mothers (person mean = 42.466, non-person mean = 39.863), and Boys-Fathers (person mean = 43.614, non-person mean = 40.820) relationships. There were no significant mean differences found for the Girls-Mothers or Girls-Fathers relationships.

The second hypothesis was supported for the boys' relationship with either mothers or fathers. The hypothesis was not confirmed for the girls' relationship with either mothers or fathers.

¹⁰⁶

Roe and Siegelman, A Study of the Origin . . ., p.3.

As is noted within the scope of the Protecting scale, boys selecting towards person occupations scored significantly higher than did boys selecting towards non-person occupations, for both parents. Boys who had their needs for safety and belonging satisfied by their parents seemed to remain within a person environment in their selection of an occupation.

As to the failure of the girls to show any significant mean differences, it is conceivable that they perceived a Protecting environment as inhibiting. Inasmuch as seventh grade girls are normally about two years ahead of boys in maturation, a family environment of Protecting may be construed as unnecessarily restrictive to an early desire for freedom and independence. While parents are, perhaps, actually providing satisfaction of lower-order needs, their actions are perceived by girls as denying satisfaction. Consequently, because of this ambivalence, there is no clear-cut direction in occupational choice as being towards persons or towards non-persons.

Hypothesis Three

The third hypothesis stated that children experiencing a Casual relationship in the home should orient towards a person occupation. The t test for uncorrelated means, when *F* is not significant, was used with the Casual PCR subtest for the relationships Boys-Mothers, Girls-Mothers, and Girls-Fathers. The t test for uncorrelated means, when *F* is significant, was used with the Casual PCR subtest for the relationship Boys-Fathers.

There were significant mean differences found for the relationships of Boys-Mothers (person mean = 43.159, non-person mean = 40.573) and Boys-Fathers (person mean = 43.777, non-person mean = 40.026). There were no significant mean differences found for the relationships of Girls-Mothers or Girls-Fathers.

The third hypothesis was supported for the boys' relationship with either mothers or fathers. The hypothesis was not confirmed for the girls' relationship with either mothers or fathers.

Although the boys selecting towards person occupations scored significantly higher on the Casual scale for both parents, than did boys selecting towards non-person occupations, these findings were in opposition to Hagen's findings.¹⁰⁷ Hagen, using the X^2 statistic, found that his 113 male college graduates showed a Casual family atmosphere as relating to a towards non-person occupation. An explanation of these two opposing findings may well have been offered by Hagen himself, "The wide range of vocational orientations which can be followed within the limits of the [scientific and technological occupational] groups permit expression of many kinds of personalities or need patterns."¹⁰⁸ It is possible, therefore, that Hagen's group of subjects may have been at the person end of the scientific-technological spectrum, and thus provided support to the present study's assumption that Casual is a towards person determinant.

¹⁰⁷Hagen, Journal of Counseling Psychology, VII, No. 4, p. 254.

¹⁰⁸Ibid., p. 255.

Inspection of the reliabilities and the normality of distributions, Table 6 and Table 3 respectively, offers no explanation as to why boys differentiated for both parents, but that girls did not. Perhaps girls need a more definite expression of familial love and protection than casualness, in order to have parental relationship influence behavior. Conversely, a Casual environment gives to boys a freedom for self-expression which is manifested in his seeking other people as an outlet for that self-expression.

Hypothesis Four

The fourth hypothesis stated that children experiencing a Rejecting relationship in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, was used with the Rejecting PCR subtest for the relationships of Boys-Fathers, Girls-Mothers, and Girls-Fathers. The t test for uncorrelated means, when F is significant, was used with the Rejecting PCR subtest for the relationship of Boys-Mothers.

There was a significant mean difference found for the Girls-Fathers (person mean = 28.926, non-person mean = 31.892) relationship. There were no significant mean differences found for the relationships of Boys-Mothers, Boys-Fathers, or Girls-Mothers.

The fourth hypothesis was supported for the relationship between Girls and Fathers. The hypothesis was not confirmed for the relationships of Boys-Mothers, Boys-Fathers, and Girls-Mothers.

The results of the test of the fourth hypothesis tend to be perplexing. Of the four parent-child pairings, only the Girls-Fathers relationship proved of significance for the Rejecting scale. Girls who

selected non-person occupations perceived their fathers as more rejecting than those girls who selected person occupations. Although this same orientation was found to be true of the Girls-Mothers relationship, it was not a statistically significant relationship. On the other hand, boys who selected person occupations scored higher for both Mother and Father on the Rejecting scale, although neither mean difference was significant.

It might be hypothesized that boys are capable of taking rejection in stride, whereas girls are affected by it much more strongly. Boys may well respond to rejection with a denial of the entire parental relationship, and thus seek satisfaction of basic needs with people outside of the immediate family. Girls, however, being more constrained by society's mores must forbear the parental relationship and may, therefore, gravitate towards non-person things for basic need satisfaction. But, a still unanswered question is, "Why is the Girls-Fathers relationship significant, whereas the Girls-Mothers relationship is not?"

A partial answer to the above question may lie in the phenomena first found by O'Connor¹⁰⁹ and later investigated at The University of Oklahoma Guidance Center.¹¹⁰ O'Connor investigated the voluntary failure rate of naval aviation cadets at Pensacola, Florida, as it

¹⁰⁹ William F. O'Connor, "Failure to Complete as a Family Characteristic," Outer Space Medicine, XXXIV, No. 2 (1963), pp. 142-144.

¹¹⁰ Interview with Dr. David K. Trites, Consultant, The University of Oklahoma Guidance Center, Norman, Oklahoma, 23 April, 1964.

related to the parents' failure to complete certain grades in school, i. e., failed to complete the eighth grade, failed to complete the twelfth grade, or failed to complete the sixteenth grade. O'Connor found a significant relationship between those cadets who voluntarily failed to complete the flight training program, and their parents who voluntarily failed to complete their education.

The same phenomena was investigated with the 1962 freshman class at The University of Oklahoma. The results of The University of Oklahoma's work with the failure to complete phenomena showed similar parental influences upon girls as was found with the PCR sub-test Rejecting. No relationship with Girls-Mothers was found, but a significant relationship with Girls-Fathers was found. Perhaps it is as Baughman and Welsh noted: "Our guess is that fathers, besides influencing their son's sex-role behavior, affect many other role-behaviors of both sons and daughters."¹¹¹

Perhaps the psychoanalytic electra complex may serve to partially explain such a strong influence upon daughters by the fathers. Whereas the like-sexed parent appears to be less influential on unconscious motivators, the opposite-sexed parent appears to be most influential on this age group.

It is also possible that in many families only the father's behavior is perceived as being relevant to an occupational role, and

¹¹¹ E. E. Baughman and G. S. Welsh, Personality: A Behavioral Science (New York: Prentice-Hall, 1962), p. 215.

hence the outside world. Or, it just may be that the single scale of Rejection, operating alone, is simply not strong enough to note significant differences (see discussion of hypothesis twelve).

Hypothesis Five

The fifth hypothesis stated that children experiencing a Neglecting relationship in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is significant, was used with the Neglecting PCR subtest for the relationship Boys-Mothers. The t test for uncorrelated means, when F is not significant, was used with the Neglecting PCR subtest for the relationships of Boys-Fathers, Girls-Mothers, and Girls-Fathers.

There were no significant mean differences found for any of the parent-child pairings. Therefore, the fifth hypothesis was not confirmed.

Although there were no significant mean differences found, the same orientation towards persons or towards non-persons existed for the Neglecting scale as did for the Rejecting scale, i. e., boys selecting person occupations scored higher than those selecting non-person occupations. Girls selecting non-person occupations scored higher than those selecting person occupations.

Tables 10 and 11 show intercorrelational coefficients for Rejecting and Neglecting of about .74 for each relationship. Therefore, perhaps the same commentary as was developed for hypothesis four, Rejecting, may be applicable for hypothesis five, even though there existed no significant mean differences. Additionally, it should be noted from the high X^2 values in Table 3, that perhaps a too liberal

TABLE 10

PCR SUBTEST INTERCORRELATIONS FOR 205 BOYS

PCR Subtest	Mother Father	PCR Subtest									
		Pro.	Cas.	Low.	Rej.	Dem.	Neg.	Rew. S-L	Rew. D-O	Pun. S-L	Pun. D-O
Pro.	M	1.000	.293	.070	.202	.310	.151	.208	.325	.170	.150
	F	1.000	.345	.369	.123	.278	.037	.524	.524	.242	.176
Cas.	M		1.000	.033	.064	-.086	.128	.153	.344	-.059	-.113
	F		1.000	.088	.137	-.097	.225	.275	.428	-.011	-.099
Low.	M			1.000	-.590	.010	-.668	.556	.304	-.146	-.270
	F			1.000	-.602	.133	-.633	.637	.329	-.136	-.209
Rej.	M				1.000	.318	.741	-.174	-.028	.420	.372
	F				1.000	.177	.777	-.203	-.038	.520	.478
Dem.	M					1.000	.220	.237	.209	.425	.423
	F					1.000	.065	.256	.098	.401	.396
Neg.	M						1.000	-.276	-.069	.352	.319
	F						1.000	-.241	-.031	.404	.396
Rew. S-L	M							1.000	.519	.105	.055
	F							1.000	.655	.206	.132
Rew. D-O	M								1.000	.050	.209
	F								1.000	.093	.161
Pun. S-L	M									1.000	.440
	F									1.000	.607
Pun. D-O	M										1.000
	F										1.000

52

TABLE 11

PCR SUBTEST INTERCORRELATIONS FOR 150 GIRLS

PCR Subtest	Mother Father	PCR Subtest									
		Pro.	Cas.	Lov.	Rej.	Dem.	Neg.	Rew. S-L	Rew. D-O	Pun. S-L	Pun. D-O
Pro.	M	1.000	.002	.291	-.024	.341	-.212	.347	.374	.187	.056
	F	1.000	.152	.452	-.143	.023	-.404	.443	.447	.007	-.026
Cas.	M		1.000	-.134	.158	-.162	.358	-.045	.145	-.038	-.120
	F		1.000	.114	-.022	-.232	.098	.158	.283	-.158	-.140
Lov.	M			1.000	-.669	-.106	-.692	.529	.366	-.235	-.222
	F			1.000	-.570	-.036	-.666	.489	.409	-.252	-.219
Rej.	M				1.000	.345	.731	-.307	-.269	.520	.423
	F				1.000	.406	.737	-.300	-.088	.594	.551
Dem.	M					1.000	.156	.152	.063	.456	.540
	F					1.000	.272	.058	.115	.493	.463
Neg.	M						1.000	-.341	-.165	.338	.298
	F						1.000	-.356	-.175	.426	.401
Rew. S-L	M							1.000	.486	.096	-.090
	F							1.000	.463	-.034	-.068
Rew. D-O	M								1.000	-.060	.027
	F								1.000	-.047	.116
Pun. S-L	M									1.000	.403
	F									1.000	.609
Pun. D-O	M										1.000
	F										1.000

interpretation was made of Guilford's criteria for the acceptability of the use of parametric statistics with non-normal data.¹¹²

Hypothesis Six

The sixth hypothesis stated that children experiencing a Demanding relationship in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, was used with the Demanding PCR subtest for each of the four parent-child relationships.

There was a significant mean difference found for the relationship between Girls-Fathers (person mean = 44.681, non-person mean = 48.216). There were no significant mean differences found for the relationships Boys-Mothers, Boys-Fathers, and Girls-Mothers.

The sixth hypothesis was supported for the Girls-Fathers relationship. The hypothesis was not confirmed for the Boys-Mothers, Boys-Fathers, and Girls-Mothers relationships.

As with hypothesis four, the only significant relationship which was found for the Demanding scale was that of Girls-Fathers. Those girls selecting non-person occupations scored higher on Demanding than did those girls selecting person occupations. Here again, the Girls-Mothers relationship was oriented correctly towards non-persons; whereas, with both parents the boys oriented in the opposite direction, although none of the relationships were statistically significant.

¹¹² Guilford, Fundamental Statistics . . . , p. 150.

The same rationale used in attempting to explain the results in hypothesis four, Rejecting, may pertain here. The boy may be able to react to a Demanding relationship without stress. The adolescent girl may be so closely identified with her father that a Demanding behavior will influence her unconscious motivators for basic need satisfaction, and hence occupational choice.

Hypothesis Seven

The seventh hypothesis stated that children experiencing a Reward Symbolic-Love relationship in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, was used with the Reward Symbolic-Love PCR subtest for each of the four parent-child pairings.

There were no significant mean differences found for any of the four parent-child pairings. Therefore, the seventh hypothesis was not confirmed.

Although no relationship was shown to be significant, three of the four parent-child pairings for Reward Symbolic-Love were oriented towards support for the hypothesis; i. e., Boys-Mothers, Boys-Fathers, and Girls-Fathers. Only the Girls-Mothers relationship failed to show the correct orientation, but this only by a difference of one point between mean scores.

The failure of this scale to differentiate may be attributable to the low number of items comprising the scale (ten items). Additionally, the possibility of response set operating to restrict the range of results should be considered. It should not be too surprising

that a child might report his parents as praising his efforts -- even if in reality there was no praise in evidence.

Hypothesis Eight

The eighth hypothesis stated that children experiencing a Reward Direct-Object relationship in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, was used with the Reward Direct-Object PCR subtest for each of the four configurations.

There were significant mean differences found for the relationships Boys-Mothers (person mean = 29.500, non-person mean = 27.487), and Boys-Fathers (person mean = 29.182, non-person mean = 27.111). There were no significant mean differences found for the relationships between Girls-Mothers or Girls-Fathers.

The hypothesis was supported for the boys' relationship with either mother or father. The hypothesis was not confirmed for the relationship of girls with either mother or father.

Although the girls do not show a clear orientation towards persons, neither do they show a towards non-persons orientation. Girls seem to be in a neutral state regarding material possessions as far as person, non-person orientation is concerned.

It would appear that boys react more specifically to material sanctions which indicate approbation, than do girls. Tangible demonstrations of approval, such as money, seem to carry greater significance to the well-being and security of boys than they do to girls. Accordingly, if satisfaction of the basic needs is met by receiving material things from persons, then persons will be unconsciously thought of as being a

continued source of these lower-order needs, as well as higher-order needs. Certainly, in our materialistic society today, boys determine early in life that material possessions seem to be the way to success and well-being.

Hypothesis Nine

The ninth hypothesis stated that children experiencing a Punishment Symbolic-Love relationship in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, was used with the Punishment Symbolic-Love PCR subtest for each of the four parent-child pairings.

There were no significant mean differences found for any of the four parent-child pairings. Therefore, the ninth hypothesis was not confirmed.

That there were no significant findings for Punishment Symbolic-Love is surprising. Certainly the literature is clear about the fact that withdrawal of love is the most serious punishment that a child can experience.

These results are made very confusing by the tendency of the high scoring boys in the sample to orient more towards person occupations, even though the differences are not statistically significant. The fact that this scale contained only ten items, and was low in reliability (see Table 8) may explain its inability to differentiate meaningfully. Additionally, it should be noted from the data in Table 3, that the χ^2 values for normality of the boys' distributions were quite high. It may be that a too liberal interpretation of Guilford's

criteria¹¹³ for the acceptability of the use of parametric statistics with non-normal distributions was made.

Hypothesis Ten

The tenth hypothesis stated that children experiencing a Punishment Direct-Object relationship in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, was used with the Punishment Direct-Object PCR sub-test for each of the four configurations.

There were no significant mean differences found for any of the four parent-child pairings. Therefore, the tenth hypothesis was not confirmed.

The results for Punishment Direct-Object are the same as for Punishment Symbolic-Love -- no significant mean differences. Here again, the boys tended to orient in an opposite direction, those selecting towards person occupations scoring higher on the scale than those selecting towards non-person occupations.

The same comment on the number of items in the scale, the reliability, and the size of the X^2 in Table 3, that were made for Punishment Symbolic-Love, may apply here. Physical abuse, or the threat of abuse within the family, may be so contrasting to the behavior of other people that the child seeks persons outside of the family for relief from abuse. This external relationship provides satisfaction of the

¹¹³Ibid.

basic need for security. Within this context, adolescent boys are more free than adolescent girls to explore the society outside of the family. Therefore, adolescent girls must turn to non-persons if satisfaction of basic needs is to be attained.

Hypotheses Eleven Through Sixteen

For hypotheses eleven through sixteen an analysis of the PCR intercorrelational matrices (see Table 10 and Table 11) gave varying degrees of support for the selected combinations of the PCR subtests. "Substantial [positive] relationship"¹¹⁴ was generally shown between Loving and Reward Symbolic-Love. A similar relationship was shown between Demanding, Punishment Direct-Object, and Punishment Symbolic-Love; also Reward Symbolic-Love and Reward Direct-Object. "Marked [positive] relationship"¹¹⁵ was shown between Rejecting and Neglecting. The scales for Protecting and Casual generally showed "small [to] negligible [positive] relationship"¹¹⁶ with other scales.

For each of the selected PCR subtest combinations, a total score for each of the 205 boys and the 150 girls was determined. As was done in testing hypothesis one through hypothesis ten, the subjects were divided into those selecting person occupations and those selecting non-person occupations. Table 12 shows the number of boys and the number of girls who selected either a person or non-person occupation.

¹¹⁴Ibid., p. 145.

¹¹⁵Ibid.

¹¹⁶Ibid.

TABLE 12

MEANS AND VARIANCES OF EACH SELECTED PCR SUBTEST COMBINATION IN EACH
CONFIGURATION FOR SUBJECTS SELECTING PERSON OCCUPATIONS
AND SUBJECTS SELECTING NON-PERSON OCCUPATIONS

PCR Subtest Combination	Towards Person or Non-Person Occupation	Boys ^a				Girls ^b			
		Mothers		Fathers		Mothers		Fathers	
		\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2	\bar{X}	s^2
Pro. ⁺ +Gas. ⁺ Lev.	P	142.321	204.658	141.704	305.041	145.229	191.015	144.815	327.070
	NP	137.772	208.889	135.712	298.354	142.333	179.945	140.143	232.246
Rej. ⁺ +Dem. ⁺ Neg.	P	105.440	396.059	112.870	397.999	96.660	308.356	99.727	426.990
	NP	102.640	305.189	109.339	369.868	103.378	303.578	109.828	336.912
Rew.S-I ⁺ Rew.D-O	P	63.655	122.205	62.494	160.729	63.265	108.518	62.193	133.268
	NP	60.602	133.546	59.272	154.200	63.324	108.392	61.286	112.034
Pun.S-I ⁺ Pun.D-O	P	53.131	106.308	53.349	127.194	48.398	80.385	47.018	120.964
	NP	51.019	74.811	51.913	136.063	50.892	115.099	50.730	120.369
Pro. ⁺ +Gas. ⁺ Lev. ⁺ Rew.S-I ⁺ Rew.D-O	P	205.850	499.271	204.244	801.272	208.473	486.843	206.954	723.515
	NP	198.327	533.528	195.036	736.920	205.543	411.553	201.528	494.031
Rej. ⁺ +Dem. ⁺ Neg. ⁺ Pun.S-I ⁺ Pun.D-O	P	158.518	724.256	166.270	806.394	145.035	573.627	146.730	856.366
	NP	153.772	538.013	161.301	791.162	154.270	677.481	160.027	686.641

^aPerson n = 88; Non-Person n = 117

^bPerson n = 113; Non-Person n = 37

Using the preceding dichotomy, mean scores and variances were computed for each of the two groups, on each of the four parent-child pairings. Table 12 contains the values of these means and variances.

Variances were used to compute an F ratio to establish the appropriateness of the t test. The appropriate t test was used to determine if any statistically significant differences existed between the means, of the two groups. Table 13 contains those values of t and F associated with each PCR subtest combination. The .05 level of significance was used to accept or reject the statistical null hypothesis of no differences existing between the variances or means of the two groups under study, i. e., the person occupation group and the non-person occupation group.

As an additional and non-parametric check on the t-test analysis, the distribution of total scores for any particular PCR subtest combination was dichotomized at the median. Combining this median split with the dichotomy of selection of person occupation or selection of non-person occupation permitted the establishment of a four-fold contingency table. One dimension of this contingency table represented the selection of either a person or a non-person occupation. The other dimension represented the frequency of the subject's total PCR combination score falling above or below the median. These contingency tables were then tested for significance by the Median Chi Square test. The .05 level of significance was used to accept or reject the statistical null hypothesis of no difference existing between the observed and expected frequencies in each of the four cells.

TABLE 13

VALUES OF \underline{t} AND FOR SELECTED PCR SUBTEST COMBINATIONS

PCR Subtest Combination	Boys ^a				Girls ^b			
	Mothers		Fathers		Mothers		Fathers	
	\underline{t}^c	F ^e	\underline{t}^c	F ^e	\underline{t}^d	F ^e	\underline{t}^d	F ^e
Pro.+Cas.+Lov.	2.198	<u>1.021</u>	2.419	1.022	1.098	1.062	1.377 ^g	1.408
Rej.+Dem.+Neg.	1.050	1.298	1.256	1.076	-2.014 ^h	1.016	-2.584 ^h	1.267
Rew.S-L+Rew.D-O	1.888	<u>1.093</u>	1.794	1.042	-.030 ^h	1.001	.412	1.190
Pun.S-L+Pun.D-O	1.539	1.421	.876	<u>1.070</u>	-1.397 ^{g,h}	<u>1.432</u>	-1.783 ^h	1.005
Pro.+Cas.+Lov.+ Rew.S-L+Rew.D-O	2.316	<u>1.069</u>	2.322	1.087	.697	1.183	1.094	1.464
Rej.+Dem.+Neg.+ Pun.S-L+Pun.D-O	1.350	1.346	1.226	1.019	-1.992 ^h	<u>1.181</u>	-2.454 ^h	1.247

^a88 boys selected person occupations; 117 selected non-person occupations^b113 girls selected person occupations; 37 selected non-person occupations^cSignificant \underline{t} at .05 level, with 203 d.f. = 1.972^dSignificant \underline{t} at .05 level, with 148 d.f. = 1.976^eWhen the variance of those selecting person occupations is greater than that of those selecting non-person occupations, the significant value of F at the .05 level = 1.385. When non-person variance is greater than person variance, F = 1.410.

TABLE 13 -- Continued

^fSignificant t at .05 level, with 166.6 d.f. = 1.977

^gSignificant t at .05 level, with 90.9 d.f. = 1.987

^hAll negative value t's indicate non-person mean is greater than person mean.

TABLE 14

OBSERVED AND EXPECTED FREQUENCIES OF PERSON AND NON-PERSON OCCUPATIONAL CHOICE BICHO-TOMIZED
BY MEDIAN OF TOTAL SCORE ON SELECTED PCR SUBTEST COMBINATIONS FOR BOYS

PCR Subtest Combinations	Mothers				Fathers			
	Observed		Expected		Observed		Expected	
	P	NP	P	NP	P	NP	P	NP
Pro. + Cas. + Lov.	45 ^a	53	41.08	56.29	49	48	42.89	54.10
	38 ^b	62	41.92	58.08	39	63	45.10	56.89
Rej. + Dem. + Neg.	44	56	42.42	57.58	47	50	41.85	55.15
	40	58	41.58	56.42	38	62	43.15	56.85
Rew. S-L + Rew. D-O	49	51	43.50	56.50	46	51	41.43	55.57
	38	62	43.50	56.50	39	63	43.57	58.43
Pun. S-L + Pun. D-O	48	45	40.90	52.10	43	57	42.79	57.21
	36	62	43.10	54.90	43	58	43.21	57.79
Pro. + Cas. + Lov. + Rew. S-L + Rew. D-O	49	50	43.06	55.94	49	49	42.56	55.43
	38	63	43.94	57.06	37	63	43.43	56.56
Rej. + Dem. + Neg. + Pun. S-L + Pun. D-O	42	56	41.65	56.35	45	54	42.50	56.50
	43	59	43.35	58.65	40	59	42.50	56.50

^aFor each PCR subtest combination the first row of figures represents values above the median.

^bFor each PCR subtest combination the second row of figures represents values below the median.

TABLE 15

OBSERVED AND EXPECTED FREQUENCIES OF PERSON AND NON-PERSON OCCUPATIONAL CHOICE DICHOTOMIZED
BY MEDIAN OF TOTAL SCORE ON SELECTED PCR SUBTEST COMBINATIONS FOR GIRLS

PCR Subtest Combinations	Mothers				Fathers			
	Observed		Expected		Observed		Expected	
	P	NP	P	NP	P	NP	P	NP
Pro. + Cas. + Lov.	57 ^a	16	54.88	18.12	71	19	67.81	22.19
	52 ^b	20	54.12	17.88	39	17	42.19	13.81
Rej. + Dem. + Neg.	50	24	55.25	18.75	49	24	55.38	17.62
	59	13	53.75	18.25	61	11	54.62	17.38
Rew. S-L + Rew. D-O	54	21	56.50	18.50	56	17	55.26	17.74
	59	16	56.50	18.50	53	18	53.74	17.26
Pun. S-L + Pun. D-O	55	20	56.50	18.50	52	23	56.50	18.50
	58	17	56.50	18.50	61	14	56.50	18.50
Pro. + Cas. + Lov. + Rew. S-L + Rew. D-O	57	17	56.14	17.86	55	17	54.25	17.75
	53	18	53.86	17.14	55	19	55.75	18.25
Rej. + Dem. + Neg. + Pun. S-L + Pun. D-O	54	21	56.50	18.50	49	25	55.50	18.50
	59	16	56.50	18.50	62	12	55.50	18.50

^aFor each PCR subtest combination the first row of figures represents values above the median.

^bFor each PCR subtest combination the second row of figures represents values below the median.

Table 14 and Table 15 display the values of the observed and the expected frequencies of subjects selecting person or non-person occupations, as dichotomized by the median score, for each PCR subtest. Table 16 contains the values of χ^2 computed for each PCR subtest.

TABLE 16

CHI SQUARE VALUES ON PCR SUBTEST COMBINATIONS

PCR Subtest Combinations	Boys		Girls	
	Mothers	Fathers	Mothers	Fathers
Pro. + Cas. + Lov.	1.058	3.040	.667	1.588
Rej. + Dem. + Neg.	.205	2.193	3.987 ^a	6.131 ^a
Rew. S-L + Rew. D-O	2.462	1.715	.897	.093
Pun. S-L + Pun. D-O	4.287 ^a	.004	.323	2.906
Pro. + Cas. + Lov. + Rew. S-L + Rew. D-O	2.867	3.404	.112	.084
Rej. + Dem. + Neg. + Pun. S-L + Pun. D-O	.010	.515	.897	6.090 ^a

^aSignificant χ^2 at the .05 level = 3.841.

Hypothesis Eleven

The eleventh hypothesis stated that children experiencing a combination of Protecting, Casual, and Loving relationships in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the Protecting, Casual, and Loving PCR combination for Boys-Mothers, Boys-Fathers, and Girls-Mothers. The t test for uncorrelated means, when F

is significant, and the median chi square test were used with the same PCR combination for the Girls-Fathers relationship.

There was a significant mean difference found with Boys-Mothers (person mean = 142.321, non-person mean = 137.772), and with Boys-Fathers (person mean = 141.704, non-person mean = 135.712). There were no significant mean differences found with the Girls-Mothers or Girls-Fathers relationships. There were no significant differences found between the observed and expected frequencies of occupational choice in any of the parent-child relationships.

On the basis of the t tests, the eleventh hypothesis was supported for the boys' relationship with either parent. The hypothesis was not confirmed for the girls' relationship with either parent.

The fact that the Loving scale was included in this combination may account for the different results with the t and X^2 tests. Being the more sensitive of the two tests, the t test was able to detect slight differences whereas the X^2 test was not.

It would appear that the scales for Protecting and Casual, which were statistically significant when tested separately, provided sufficient strength to the combination to overcome the masking effect of the Loving scale. It appears that either the Loving scale is not valid; or that Loving, as a parent-child relationship, operates in a manner which was discussed in hypothesis one.

Hypothesis Twelve

The twelfth hypothesis stated that children experiencing a combination of Rejecting, Neglecting, and Demanding relationships in the home

should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the Rejecting, Neglecting, and Demanding PCR combination in the four configurations.

There was a significant mean difference found with Girls-Mothers (person mean = 96.660, non-person mean = 103.378) and with Girls-Fathers (person mean = 99.727, non-person mean = 109.828). There was also a significant difference found between the observed and the expected frequencies of non-person occupational choice for the relationships of Girls-Mothers ($f_o = 24.00$, $f_e = 18.75$), and Girls-Fathers ($f_o = 24.00$, $f_e = 17.62$).

The twelfth hypothesis was supported for the relationships between girls and either parent. The hypothesis was not confirmed for the relationships between Boys-Mothers or Boys-Fathers.

The result for the father-daughter relationship was not unexpected. When the scales for Demanding and Rejecting were tested singly, both showed statistically significant mean differences. However, for the mother-daughter relationship, it appears that the negative behaviors must be in a more concentrated form in order to exert an influence upon girls' occupational orientation.

These data also lend support to the contention that it is the dynamic behaviors of Rejecting and Demanding that have the greatest influence upon girls' occupational choice. The passive behavior of Neglecting does not appear to have too great a contribution to make in this regard.

There were no statistically significant findings for the boys' relationships with either parent. The discussion on hypothesis four, Rejecting, may also be applicable for hypothesis twelve in explaining the failure to find any parental influence upon boys' occupational selection.

An interesting tendency for boys is their occupational orientation in opposition to Roe's theory, i. e., higher mean scores for those selecting person occupations than for those selecting non-person occupations. It may be as Roe noted ". . . children [experiencing extreme demanding and rejecting homes] might become person-oriented in search of satisfactions they never had."¹¹⁷

Hypothesis Thirteen

The thirteenth hypothesis stated that children experiencing a combination of Reward Symbolic-Love and Reward Direct-Object relationships in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the Reward Symbolic-Love and Reward Direct-Object PCR combination for the four configurations.

There were no significant mean differences found between those selecting person occupations and those selecting non-person occupations. Also, there was no significant difference found between the observed frequency of occupational choice and the expected frequency of occupational choice for any of the four parent-child pairings. Therefore, the hypothesis was not confirmed.

¹¹⁷Roe and Siegelman, A Study of the Origins . . . , p. 2.

Although none of the results were significant for Reward Symbolic-Love and Reward Direct-Object, the tendency appears to be for boys to support Roe's theory when consideration is given to a warm and rewarding parental relationship. The mean differences for girls are too small to warrant any statement about their tendency.

Hypothesis Fourteen

The fourteenth hypothesis stated that children experiencing a combination of Punishment Symbolic-Love and Punishment Direct-Object should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the Punishment Symbolic-Love and Punishment Direct-Object PCR combination for Boys-Fathers and Girls-Mothers. For Boys-Mothers and Girls-Fathers, the t test for uncorrelated means, when F is significant, and the median chi square test were used.

There were no statistically significant mean differences found for any of the four relationships. A statistically significant difference, in opposition to Roe's theory, was found between the observed and expected frequencies for the person occupational choice of Boys-Mothers ($f_o = 48.00$, $f_e = 40.90$). The fourteenth hypothesis was not confirmed.

The unusual orientation of boys in opposition to Roe's theory, i. e., towards person rather than non-person occupations, was noted in the discussion of hypotheses nine and ten (pages 70-72). However, the noteworthy finding for this PCR combination test was that the more sensitive t test was not statistically significant, whereas the X^2 test was statistically significant. A partial explanation of this unusual result may be obtained from inspection of the formula for t (page 43). With the

same n's; as the mean difference reduces, the t value becomes smaller; as the variances become smaller, the t value becomes smaller. Both of these conditions prevail, i. e., of all the PCR subtest combinations, this combination has both the smallest mean difference and the smallest variances. It should also be noted that the variances were shown to be statistically unequal by the F test.

Behaviorally, the same explanation developed for hypothesis twelve may be applicable for this hypothesis.

Hypothesis Fifteen

The fifteenth hypothesis stated that children experiencing a combination of Protecting, Casual, Loving, Reward Symbolic-Love, and Reward Direct-Object relationships in the home should orient towards a person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the PCR combination of Protecting, Casual, Loving, Reward Symbolic-Love, and Reward Direct-Object for Boys-Mothers, Boys-Fathers, and Girls-Mothers. For the relationship Girls-Fathers, the t test for uncorrelated means, when F is significant, and the median chi square test were used.

There were significant mean differences found with Boys-Mothers (person mean = 205.850, non-person mean = 198.327), and with Boys-Fathers (person mean = 204.244, non-person mean = 195.036). There were no significant mean differences for girls with either parent.

There were no significant differences between observed and expected frequencies for any parent-child relationship.

The fifteenth hypothesis was supported for the boys' relationships with either mother or father. The hypothesis was not confirmed for the girls' relationships with either parent.

That this five-scale combination was statistically significant for Boys-Mothers and Boys-Fathers was not unexpected. These two relationships have been statistically significant for the single scales of Protecting, Casual, and Reward Direct-Object, and the combination of Protecting, Casual and Loving. However, the degree of influence of these positive relationships does not appear to be sufficiently strong to separate the person and non-person groups enough to produce a statistically significant χ^2 value.

Hypothesis Sixteen

The sixteenth hypothesis stated that children experiencing a combination of Rejecting, Demanding, Neglecting, Punishment Symbolic-Love, and Punishment Direct-Object relationships in the home should orient towards a non-person occupation. The t test for uncorrelated means, when F is not significant, and the median chi square test were used with the PCR combination of Rejecting, Demanding, Neglecting, Punishment Symbolic-Love, and Punishment Direct-Object for the four parent-child relationships.

There were significant mean differences found with Girls-Mothers (person mean = 145.035, non-person mean = 154.270), and with Girls-Fathers (person mean = 146.730, non-person mean = 160.027). There were no significant mean differences found for Boys-Mothers or Boys-Fathers.

There was a significant difference found between the observed and the expected frequency of non-person occupational choice, for the rela-

tionship Girls-Fathers ($f_o = 25.000$, $f_e = 18.50$). There were no significant differences found between the observed and the expected frequencies of occupational choice for the relationships of Boys-Mothers, Boys-Fathers, and Girls-Mothers.

The sixteenth hypothesis was supported for the relationships between Girls-Mothers and Girls-Fathers. The hypothesis was not confirmed for the relationships Boys-Mothers and Boys-Fathers.

The results of this hypothesis only serve to support the contention stated previously: girls react very significantly to a cold, punishing, neglecting father relationship in their selection of towards non-person occupations. Roe noted in her study of women engineers that ". . . people who enter occupations which are deviant from the normal sex-role expectations usually have had more stressful family histories,"¹¹⁸ and that "for the women . . . the engineers much more frequently identified with their fathers."¹¹⁹

For the Girls-Fathers relationships the less sensitive X^2 test had significance, whereas for Girls-Mothers it did not. It appears that the mother-daughter relationship is slightly influential, but only when a combination of negative behaviors are brought to bear on the child.

It should also be noted, for the Girls-Mothers relationship, that when the two Punishment scales are added to Neglecting, Demanding, and Rejecting the more sensitive t test is significant, whereas the X^2 test is not. When Neglecting, Demanding, and Rejecting were tested as a com-

¹¹⁸Ibid.

¹¹⁹Ibid., p. 37.

bination both t and X^2 were statistically significant. It appears that the two Punishment scales are unable to provide sufficient power and stability to elicit the perceptions of behavior for which they were designed.

Hypothesis Seventeen

The seventeenth hypothesis stated that seventh grade children should exhibit more "halo effect" in perceiving their parents than do male college seniors.

An analysis of the inter-parent correlations (Table 17) of the seventh grade students, as compared with the inter-parent correlations of Roe's Harvard seniors, was made. The analysis showed higher coefficients of correlation between parents for both boys and girls in every PCR subtest. Each coefficient of correlation for boys and girls was significant beyond the .01 level. Application of the "sign test"¹²⁰ with the Harvard sample and the inter-parent correlation coefficients of boys and girls produced a level of significance of .001. Therefore, the seventeenth hypothesis was supported.

This was the only hypothesis fully confirmed by the present study. It is, however, not too surprising that at younger ages, children tend to perceive their parents more as a single constellation of adulthood, rather than as separate entities. However, it should be noted (see Table 18) that in three of the four significant relationships for boys,

¹²⁰ Guilford, Fundamental Statistics . . . , pp. 248-249.

TABLE 17
PCR INTER-PARENT CORRELATIONS^a

PCR Subtest	Harvard Sample ^b	Seventh Grade	
		Boys ^c	Girls ^c
Loving	.495	.738	.680
Protecting	.568	.592	.685
Demanding	.398	.653	.594
Rejecting	.569	.750	.690
Neglecting	.546	.649	.669
Casual	.425	.623	.512
Reward S-L	.550	.694	.706
Reward D-O	.677	.769	.791
Punishment S-L	.530	.540	.588
Punishment D-O	.639	.689	.690

^aAll correlations significant at less than the .01 level.

^bRoe and Siegelman, A Parent-Child Relations . . ., p. 7.

^cThe chance expectation of all ten coefficients of correlation being greater than the Harvard sample is less than .001.

both parents were equally influential; whereas, for girls, the father relationship was noticeably more powerful, with four out of five relationships being significant.

STATISTICALLY SIGNIFICANT^a \underline{t} AND χ^2 TESTS OF PCR
SUBTEST SCORES BICHOTOMIZED FOR PERSON,
NON-PERSON OCCUPATIONAL CHOICE WITH
FOUR PARENT-CHILD RELATIONSHIPS

PCR Subtest	Parent-Child Relationship			
	Boys-Mothers	Boys-Fathers	Girls-Mothers	Girls-Fathers
Pro.	\underline{t}	\underline{t}	..	..
Cas.	\underline{t}	\underline{t}	..	..
Lov.	..	..	..	..
Neg.	..	..	..	..
Dem.	..	..	..	\underline{t}
Rej.	..	..	..	\underline{t}
Rew. S-I	..	..	..	..
Rew. B-O	\underline{t}	\underline{t}	..	..
Pun. S-I	..	..	..	..
Pun. B-O	..	..	..	..
Pro.+Cas.+Lov.	\underline{t}	\underline{t}	..	..
Neg.+Dem.+Rej.	..	..	\underline{t}, χ^2	\underline{t}, χ^2
Rew.S-I+B-O	..	..	..	..
Pun.S-I+B-O	..	..	..	..
Pro.+Cas.+Lov.+ Rew.S-I+ Rew.B-O	\underline{t}	\underline{t}	..	..
Neg.+Dem.+Rej.+ Pun.S-I+ Pun.B-O	..	..	\underline{t}	\underline{t}, χ^2

^a Significant at .05 level.

Summary

This chapter established the acceptability of using parametric statistics t and F . Means, ranges, standard deviations, and reliabilities were computed. Data pertaining to the hypotheses were treated statistically and the results discussed. Only the seventeenth hypothesis was completely supported. Partial support was found for hypotheses two, three, four, six, eight, eleven, twelve, fifteen, and sixteen. Hypotheses one, five, seven, nine, ten, and thirteen were not confirmed. The data for hypothesis fourteen, although inconclusive, was in opposition to Roe's theory.

From an analysis of Table 18, a summary can be made of the results of those hypotheses dealing with the PCR subtests and selected combinations. Results which proved significant show a definite pattern. For boys, if the relationship with either parent is perceived by the son as warm, protecting, and rewarding, they will gravitate towards person occupations. For the girls, it is the dynamic father relationship which dominates in its effect upon occupational orientation. If the Girl-Father relationship is perceived by the daughter as cold, demanding, rejecting, and punishing, she will orient towards non-person occupations. For the Girls-Mothers relationship, it appears that a concentration of negative behavior is required before it influences occupational orientation. The father is notably the stronger influence.

This chapter concluded with support for the hypothesis that younger, seventh grade children perceive their parents more as a unit than do older, male, college seniors. Chapter V will present the conclusions and implications drawn from the present research.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Introduction

This final chapter is divided into five sections, each covering an aspect of the research. Within each section, conclusions and implications for further research and counseling, if warranted, are presented.

Efficacy of Roe's Theory

The present study supported certain aspects of Roe's general theory. Specific parent-child relationships seemed to influence the occupational orientation of the seventh grade boys and girls under study. These relationships appeared to affect boys and girls differently. There was no parent-child relationship that had an equal, or similar, influence upon the children's occupational choice.

Boys tended to select a towards person occupation when perceiving the positive parental behaviors of Protecting, Casual, and Reward Direct-Object. This tendency was the same whether the relationship was with mother or father. These relationships were found to be statistically significant by the t test; but they were not strong enough to produce a statistically significant chi square value. It appeared that these relationships, as they affect occupational orientation, were not as strong as Roe hypothesized.

There was no statistically significant tendency for boys to orient towards a person occupation as a result of Loving or Reward Symbolic-Love parental relationships. Nor was there a tendency for boys to orient towards non-person occupations as a result of any of the negative parent-child relationships of Neglecting, Rejecting, Demanding, or Punishment (Symbolic-Love and Direct-Object).

Girls tended to select a towards non-person occupation when perceiving the father-daughter negative relationships of Rejecting and Demanding. These dynamic behaviors seemed to be more powerful in influencing girls' occupational orientation than the passive behavior of paternal neglect.

Girls reacted as hypothesized, i. e., towards non-person occupations, when the mother-daughter relationship was strongly negative. When perceived as single factors operating alone, Demanding and Rejecting mother behavior did not seem to influence the girls' occupational choice. However, when the mother was perceived as presenting a concentration of negative behaviors (Neglecting, Demanding, and Rejecting), the daughter tended towards non-person occupations.

It is contended that the father's influence upon girl's occupational orientation is much stronger than the mother's. An analysis of the effects of the two Punishment scales (Symbolic-Love and Direct-Object) seemed to support this contention. Table 18 provided the pattern of statistically significant results upon which the following discussion is based.

Considering the Girls-Fathers relationship: the "negative three" combination (Neglecting, Demanding, Rejecting) showed statistical significance for both t and X^2 . Similar results were obtained with the

"negative five" combination (Neglecting, Demanding, Rejecting, Punishment Symbolic-Love, and Punishment Direct-Object). However, the results for the relationship Girls-Mothers produced a slightly different pattern. Although the "negative three" was statistically significant for both t and X^2 , the "negative five" was statistically significant for the t test only. It might be concluded that the effect of the two Punishment scales is to mask an already weak relationship (Girls-Mothers). If the relationship is strong (Girls-Fathers), it can overcome the distortion which the two Punishment scales contribute.

Additionally, it should be noted from Table 18, that only for the Girls-Fathers relationship were the single scales of Demanding and Rejecting statistically significant. The influence of a Demanding or Rejecting mother upon girls' occupational orientation appears too weak for a t test to detect.

There was no tendency for girls to select towards person occupations as a result of a Loving, Protecting, Casual, or Reward (Symbolic-Love and Direct-Object) parent-child relationship. Girls did not respond in a statistically significant manner to any of the eight tests made upon these positive dimensions of the parent-child relationship.

Conclusions

As a result of the research the following conclusions were drawn:

1. The present study supports Roe's hypothesis that the parent-child relationship is a determinant of the child's occupational choice. However, these data did not confirm her hypothesis that the parent-child relationship is the determinant. The relationship seemed, rather, to be a determinant

of unknown strength with a definite pattern to its effect upon boys and girls.

2. Adolescent boys tended to select a towards person occupation if the dominant parent-child relationship, either mother's or father's, was positive in satisfying the son's needs. This conclusion was based upon the explicit assumption that satisfaction of needs is a psychologically comfortable experience. As such, the individual will unconsciously attempt to duplicate that type of interpersonal relationship which initially provided that satisfaction.
3. Adolescent boys appeared to be capable of successfully internalizing and compensating for a negative parent-child relationship as it related to occupational orientation. Boys did not seem to react to stressful interpersonal relationships with parents as Roe hypothesized. A rationale for this reaction was discussed in Chapter IV, Hypothesis Four. No conclusion should be inferred that a negative parent relationship has no effect on adolescent boys' behavior.
4. Adolescent girls tended to select a towards non-person occupation if the dominant parental relationship was a dynamically negative one with the father. They also tended towards a non-person occupation if the mother was perceived as presenting a strong concentration of negative behavior. This conclusion is based upon the explicit assumption that denial of needs is a psychologically uncomfortable experience for the individual. Accordingly, satisfaction of needs will be sought unconsciously

in a manner which will avoid uncomfortable interpersonal relationships, i. e., association with such non-person things as other living things, inanimate things, or ideas.

5. Adolescent girls' occupational orientation did not tend to be influenced by a positive parent-child relationship with either parent.

Implications for Further Study

Although the results of this study tended to be encouraging, care must be exercised in drawing generalizations from cross-sectional studies. These data seemed to support the hypothesis that the occupational orientation of adolescent boys and girls was partially in consonance with Roe's theory. It is, however, much more difficult, and presumptuous, to conclude that these same boys and girls will persist in this orientation.

It would appear that replications of the present study, using various age groups, as well as longitudinal studies are demanded. Such studies should focus upon problems of:

1. Does the parent-child influence upon occupational orientation actually exist as a general phenomena?
2. To what degree does this parent-child influence exist at various age levels?
3. To what degree does response set operate upon a child's reporting of his relations with his parents?
4. To what degree does the behavioral interaction of parents influence the child's occupational orientation?

Implications for Counseling

Until the present findings are further supported, it would be unwise for school counselors to predicate their counseling efforts upon the conclusions drawn. However, it would appear acceptable for counselors to use these findings judiciously, as supportive data in constructing a complete case study of a student. Knowledge that a withdrawn girl student has a loving mother, but a dynamically belligerent and authoritarian father may provide the key to corrective action.

Occupational Classification of Roe¹²¹

Roe's occupational classification consists of eight major groups. For the purposes of Roe's theory¹²² these eight groups were classified within a dichotomy of either a towards person occupation or a towards non-person occupation. It is contended that this dichotomy is too restrictive for purposes of testing the original hypothesis.

Within many occupations, there are specific jobs which can range the full spectrum of person to non-person orientation. For example, an aeronautical engineer can live a rather non-person existence within the confines of wind-tunnel experimentation. Conversely, he can become person oriented by involving himself in selling his company's designs. Similar relationships can be found in many other occupations.

Additionally, there may be considerable room for disagreement as to which group a particular occupation belongs. For example, as Roe

¹²¹Roe, The Psychology of, pp. 143-248.

¹²²Roe, Journal of Counseling Psychology, IV, No. 3, pp. 212-217.

and Grigg¹²³ argued -- are nurses to be classed as non-person scientists or as person-oriented service personnel? Is Roe correct in classifying them as scientists? If not, does her entire theory falter because of an inability to agree on a proper classification?

Implications for Further Study

It appears that Roe's theory will not be advanced by any further formal classification of occupations. The group to which an occupation belongs is not the critical element. It is, rather, whether or not the individual who selects a particular occupation visualizes it as predominately involving persons or non-persons. It would appear that any future questionnaire should have some way to elicit how the subject views the degree of interpersonal relations involved in his occupational selection.

A study which focused upon the classification of occupations according to the degree of interpersonal relations might prove helpful. However, the costs in time, money, and man hours might prove to be exorbitant. Also, any study turning upon a full investigation of dynamic interpersonal relationships involved in various occupations would probably be dated before it was completed.

Implications for Counseling

It is apparent that counselors must know the world of work. Knowledge of job characteristics, physical and educational qualifications, and pay scale are a few of the factors needed to properly advise students

¹²³

Grigg, Journal of Counseling Psychology, VI, No. 2, pp. 153-155.

seeking, or preparing for, work. Essential, however, to the application of Roe's theory would be knowledge of the degree of interpersonal relations involved on the job. Counselors must not accept stereotyped descriptions of jobs. Nor can they allow themselves to function with information that is dated.

The PCR Questionnaire

The PCR Questionnaire used in the present study must be criticized on several points. The quality of the results did not lend confidence to the assumption that the scales possessed sufficient validity and reliability. Although the lowest reliability for any subtest was .504, validity was not established. No mention was made by Roe of the reliability of the criterion against which she compared the PCR. Roe's only statement was that her factors ". . . seemed satisfyingly similar . . ."¹²⁴ to her selected criterion (see Chapter III for discussion of the PCR Questionnaire). Without validity, reported reliability coefficients of .504 to .876 are misleading.

Ten items to the scales for Reward and Punishment seem rather short when attempting to gain a measure of such a complex factor as behavior. Since validity depends upon reliability, and reliability depends upon test length, validity also will depend on test length.

Another weakness within the PCR was the assumption that behavior is always indicative of attitude. The questions on the PCR were designed

¹²⁴Roe and Siegelman, A Parent-Child Relations . . . , p. 2.

to elicit the subjects' perception of the parents' behavior.¹²⁵ These reports of acts of behavior were then interpreted as indicative of parental attitude. It is very questionable if all overt behavior is truly reflective of attitude. The literature dealing with child growth and development is clear that the two are not always synonymous.

Implications for Further Study

A comprehensive item analysis of the PCR appears warranted. The study should concentrate upon establishing construct and concurrent validity. A determination should be made as to the optimum length of each subtest in order to obtain maximum validity. Reliabilities for each PCR subtest in each configuration should be re-established.

A questionnaire for children, designed to elicit perceptions of parental attitude might prove to be more useful than a behavior questionnaire. If it could be hoped that children would report truthfully, the accuracy of that report is of lesser importance. The critical element is not what others think the behavior represents but, rather, what that behavior represents to the child.

Implications for Counseling

The use of the present PCR questionnaire as a predictive instrument is questionable. Until the present study is replicated, or until the PCR itself is studied, school counselors should be hesitant about using the PCR as a predictor. It can, however, be used with caution, in its present form, as an instrument to assist in discovering additional information useful in educational, occupational, and personal counseling.

¹²⁵Ibid., p. 1.

Statistical Design

It appeared that perhaps for some PCR subtests, a too liberal relaxation of the criterion for near normality was made. There were five subtests for boys that produced a value of χ^2 (see Table 3) quite discrepant from the χ^2 value at the .01 level of significance. Four of these subtests did not produce any statistically significant results. The values of χ^2 for the five non-normal subtests for girls were not greatly discrepant from the significant χ^2 value. However, four of these subtests did not produce any statistically significant findings. It appears that there probably is a limit beyond which Guilford's criteria for the acceptability of the use of parametric statistics with non-normal distributions might not be applicable. However, it must be realized that in the present study it was, perhaps, the validity of the scales which precluded any statistically significant results. Or, it may be that the behavior itself was not discriminating enough as regards to the occupational orientation of the children under study.

The .05 level of significance was selected for all tests of the statistical null hypotheses. Nineteen of the eighty-eight statistical tests computed were significant statistically in support of Ree's hypothesis. If a .10 level of significance had been selected, the eight additional subtests in Table 19 would have been significant. All of these eight subtests would have supported Ree's general theory.

It is obvious that the .05 level of significance need not restrict interpretation of statistical data. If accepting a .10 level of significance assists in interpreting behavior, there should be no magic attached to the .05 level of significance. The investigator need only weigh the

TABLE 19

ADDITIONAL PCR SUBTESTS WHICH SUPPORT ROE'S HYPOTHESIS
IF LEVEL OF SIGNIFICANCE IS .10

Boys-Mothers	Boys-Fathers	Girls-Mothers	Girls-Fathers
Pro.+Gas.+Lov.+ Rew.S-L+ Rew.D-O	Pro.+Gas.+Lov.+ Rew.S-L+ Rew.D-O	Demanding Neglecting	Punishment S-L Pun.S-L+Pun.B-O
Rew.S-L+Rew.D-O	Rew.S-L+Rew.D-O		

consequences of using such a level. The criterion suggested for such decision is: No physical or psychological danger is involved in the decision process; but instead, acceptance of a .10 level will lead the investigator positively in pursuit of the subtle quality under study.

Implications for Further Study

That investigators not accept blindly the .05 level of significance limitations, without evaluating all aspects of the problem under investigation. Acceptance of a higher significance level may provide essential but illusive keys to future research.

A Philosophical Implication

It is, perhaps, not too inharmonious to end this study with a philosophical nuance of Roe's theory. If we can assume that parents who possess normal mental health would prefer to maintain a home which is warm, loving, and protecting; and, if Roe's hypothesis about the home influencing the occupational orientation of people has merit; will society's technicians, scientists, and outdoorsmen come only from families of mental health cripples? Let us hope not!

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APPENDIX I

DEFINITIONS

Parents: Blood-related mother and father cohabitating as a family unit with child: no step-parent, no grand-parent, no foster-parent in the existent household is to be construed as part of the definition.

Vocational Choice: A written response of a classifiable vocation, occupation, preference, or goal toward which the individual shows a pre-disposition or inclination. For purposes of this study, no more than an occupational title as found in the Dictionary of Occupational Titles, Volume I, is required.

Adolescent: Male or female seventh grade student.

Parental Influence: That interpersonal force resulting from a configuration of beliefs, values, ideals, concepts, and behaviors exerted implicitly and explicitly upon the individual child.

Within this study the terms "vocation" and "occupation" will refer to the same behavioral function and are to be considered interchangeable.

APPENDIX II

MODIFIED PARENT-CHILD RELATIONS

QUESTIONNAIRE

A copy of the exact questionnaire employed will be found in the envelope on the back cover of the dissertation binding.

APPENDIX III

ROE'S CLASSIFICATION OF OCCUPATIONS

Group I Occupations: Service (Person Oriented)

The occupations in this group are those which are focused on catering to the personal tastes, needs, and welfare of others.

Social workers	Hairdressers
Vocational, educational counselors	Welfare workers
Sheriffs	YMCA, YWCA officials
Policemen	Practical nurses
Firemen	Armed forces, sergeants

Group II Occupations: Business Contact (Person Oriented)

These occupations involve persuasive selling in a direct person-to-person relationship. These are very different from over-the-counter selling.

Promoters
Public relations counselors
Retail and wholesale dealers
Salesmen: auto insurance, real estate
Buyers

Group III Occupations: Organization (Person Oriented)

These occupations are those concerned primarily with the organization and efficient functioning of government and of commercial enterprises.

Top and minor executives, all organizations	Sales clerks
High government officials, President, Cabinet members	Stenographers
Personnel managers	Typists
Officers, ship and armed services	File clerks
Manufacturers, small	Owners, catering, dry cleaning, etc.

APPENDIX III -- Continued

Group IV Occupations: Technology (Non-person Oriented)

This group includes all the modern industrial occupations, other than managerial, clerical, and sales. They are concerned with the production, maintenance, and transportation of commodities and utilities, and the technology of transportation and communication; included are the physical sciences and engineering.

Applied scientists	Small factory managers
Engineers	Bricklayers
Designers	Electricians
Aviators	Mechanics, plane and auto
Contractors, building	Repairmen, most varieties
carpentry, plumbing	

Group V Occupations: Outdoor (Non-person Oriented)

This group includes occupations in agriculture, animal husbandry, fisheries, forestry, and mining. They are occupations by which our natural resources are cultivated, gathered, or otherwise accumulated. A considerable degree of physical activity is characteristic of most of these occupations.

Landowners	Oil well drillers
Wildlife specialists	Teamsters
Poultrymen	Cowpunchers
Forest rangers	Milky hands
Farmers	Surveyors

Group VI Occupations: The Sciences (Non-person Oriented)

This group comprises those occupations concerned with the development of science and its application in all non-technical situations. It includes all research scientists, university and college science faculties, and those whose professions are based on the application of scientific principles, except in technology.

APPENDIX III -- Continued

Mathematician	University and college faculties
Scientists	Veterinarians
Dentists	Laboratory technicians
Nurses	Medical technicians
Pharmacists	Technical assistants

Group VII Occupations: General Culture (Person Oriented)

The occupations in this group are closely related to those in Group I because of the personal interest factor, and to those in Group VIII because of the cultural aspect.

Editors	Teachers
Educational administrators	Librarians
Clergymen	Reporters
Judges	Radio announcers
Lawyers	University and college faculties

Group VIII Occupations: Arts and Entertainment (Person Oriented)

This group comprises all those concerned with any of the arts, such as music, painting and dancing; and with entertaining, including athletics.

Painters, writers, composers	Interior decorators
Performers	Photographers
Athletes	Race car drivers
Music critic	Illustrators
Advertising writers	Designers, stage, jewelry

APPENDIX IV

DESCRIPTION OF PCR BEHAVIORAL CONSTRUCTS

Protective: This category includes parents who give the child's interests first priority. They are very indulgent, provide special privileges, are demonstratively affectionate, may be gushing. They select friends carefully, but will rarely let him visit other homes without them. They protect him from other children, from experiences in which he may suffer disappointment or discomfort, or injury. They are highly intrusive, and expect to know all about what he is thinking and experiencing. They reward dependency.

Demanding: Parents in this group set up high standards of accomplishment in particular areas, manners, school, etc. They impose strict regulations and demand unquestioning obedience to them, and they do not make exceptions. They expect the child to be busy at all times at some useful activity. They have high punitiveness. They restrict friendship in accord with these standards. They do not try to find out what a child is thinking or feeling, they tell him what to think or feel.

Rejecting: Parents in this group follow the extremest patterns of the preceding group, but this becomes rejecting when their attitude is a rejection of the childishness of the child. They may also reject him as an individual. They are cold, and hostile, derogate him and make fun of him and his inadequacies, and problems. They may frequently leave him alone, and often will not permit other children in the house. They have no regard for the child's point of view. The regulations they establish are not for the sake of training the child, but for protecting the parent from his intrusions.

APPENDIX IV -- Continued

Neglecting: These parents pay little attention to the child, giving him a minimum of physical care, and no affection. They forget promises made to him, forget things for him. They are cold, but are not derogatory nor hostile. They leave him alone, but do not go out of their way to avoid him.

Casual: These parents pay more attention to the child, and are mildly affectionate when they do. They will be responsive to him if they are not busy about something else. They do not think about him or plan for him very much, but take him as a part of the general situation. They don't worry much about him, and make little effort to train him. They are easy-going, have few rules, and do not make much effort to enforce those they have.

Loving: These parents give the child warm and loving attention. They try to help him with projects that are important to him, but they are not intrusive. They are more likely to reason with the child than to punish him, but they will punish him. They give praise, but not indiscriminately. They try specifically to help him through problems in the way best for him. The child feels able to confide in them and to ask them for help. They invite his friends to the house and try to make things attractive for them. They encourage independence and are willing to let him take chances in order to grow towards it. Distinction between Loving and Casual categories can be difficult. A basic differentiating factor is the amount of thought given to the child's problems.

APPENDIX IV -- Continued

Reward Symbolic-Love: The parents using this kind of reward praise their children for approved behavior, give them special attention, and are affectionately demonstrative.

Reward Direct-Object: These include tangible rewards such as gifts of money, toys, special trips, or relief from chores.

Punishment Symbolic-Love: Such punishments include shaming the child before others, isolating him, and withdrawing love.

Punishment Direct-Object: These include physical punishment, taking away playthings, reducing allowance, denying promised trips, and so on.

APPENDIX V

WORD OR PHRASE CHANGE IN PARENT-CHILD RELATIONS

QUESTIONNAIRE BY ITEM NUMBER

Both Mother and Father Questionnaire

<u>Item Number</u>	<u>Roe's Questionnaire</u>	<u>Revised Questionnaire</u>
3	made no concessions	does not take into account
5	consequences	results
17	improper	misbehave
45	playmates	friends
56	hesitation	understanding
66	unquestioning/deference	complete/obedience
73	ridiculed and made fun of	make fun of
92	consequences	results
109	toys	bicycle
105	regulations	rules and regulations
116	unquestioning	complete
121	enforcing	making me obey
123	confide in her/him	to ask her/his advice

Father Questionnaire Only

36	to excel	to be the best
----	----------	----------------

Mother Questionnaire Only

61	under any circumstances	for any reason
81	preferred	would rather

APPENDIX VI

EXCERPTS FROM A LETTER FROM DR. ANNE ROE

I do not know of any technical papers which will answer your question about validity or reliability and the affect upon it of slight changes in wording. From a clinical standpoint, of course, one would say that the important thing is that the perceived concept be the same and changes in wording should bring this about. Certainly the changes that you indicate do not seem to me to be of sufficient note that they would make any difference whatever.

A more important question I would think, would be whether reliabilities on an adult sample would also hold for a child sample, and about this one simply doesn't know. I'm afraid the only thing you could do would be to compute reliability for your own group. The issue of validity is a different one and I have no easy answer to it. Of course, we do not know how accurate the report is, but this is true of any questionnaire material. Nor would it easily be checked since we could not assume that a parent's report, for example, would be any more accurate than that of a child. From our point of view, the important thing is the way the child perceived the situation and if we can assume that he is reporting this as accurately as he can, this is more important than the accuracy of his perception.

Cordially yours,

s/ Anne Roe

Anne Roe, Ph.D., Professor of Education
Direction, Center of Research
in Careers

APPENDIX VII

SCORING SHEET

Name: _____

SCORING SHEET -- RELATIONSHIP QUESTIONNAIRE

MOTHERS -- FATHERS (strike one)

PRO	PUN S-L	REJ	CAS	REW S-L	REM	PUN D-O	LOV	NEG	REW D-O
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101		102	103		104		105	106	
107		108	109		110		111	112	
113		114	115		116		117	118	
119		120	121		122		123	124	
125		126	127		128		129	130	

Total Score:

PRO	PUN S-L	REJ	CAS	REW S-L	REM	PUN D-O	LOV	NEG	REW D-O

1. OCCUPATION NOTED BY SUBJECT: _____

2. Roe Classification of Subject's Occupational Choice

1 2 3 4 5 6 7 8

APPENDIX VIII

CODING SHEET FOR ROE'S OCCUPATIONAL SCHEMA

<u>Roe's Occupation Classification</u>	<u>Number Value Assigned for IBM Coding</u>
Service	1
Business Contact	2
Organization	3
Technology	4
Outdoor	5
Science	6
General Culture	7
Arts and Entertainment	8

NOTE:

"Person" occupations are coded: 1, 2, 3, 7, and 8.

"Non-person" occupations are coded: 4, 5, and 6.

APPENDIX IX

EXPECTED FREQUENCIES, OBSERVED FREQUENCIES, AND CHI SQUARE VALUES FOR EACH PCR SUBTEST BY CLASS INTERVALS

PCR Subtest	Class Intervals									
Boys-Mothers (n = 205)										
Protecting										
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192
Observed frequencies	22.000	23.000	21.000	21.000	11.000	22.000	18.000	19.000	25.000	22.000
Chi Squares	.161	.348	.008	.020	2.351	.044	.272	.623	1.069	.161
Punishment S-L										
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192
Observed frequencies	26.000	11.000	35.000	13.000	13.000	39.000	15.000	13.000	21.000	19.000
Chi Squares	1.670	4.286	10.100	2.658	3.067	15.347	1.409	2.793	.021	.070
Rejecting										
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192
Observed frequencies	22.000	18.000	28.000	17.000	21.000	20.000	24.000	14.000	22.000	19.000
Chi Squares	.161	.268	2.673	.553	.000	.050	.652	2.104	.136	.070
Casual										
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192
Observed frequencies	27.000	16.000	25.000	9.000	20.000	19.000	24.000	26.000	15.000	20.000
Chi Squares	2.295	.924	.948	6.335	.418	.196	.652	1.426	1.400	.001
Reward S-L										
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192
Observed frequencies	17.000	22.000	29.000	10.000	23.000	26.000	12.000	23.000	23.000	20.000
Chi Squares	.504	.136	3.442	5.268	.183	1.172	3.430	.284	.348	.001

APPENDIX IX -- Continued

PCR Subtest		Class Intervals									
Demanding											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	19.000	18.000	23.000	22.000	16.000	27.000	18.000	15.000	27.000	20.000	
Chi Squares	.070	.268	.284	.132	1.204	1.692	.272	1.513	2.183	.001	
Punishment D=0											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	20.000	19.000	21.000	10.000	33.000	19.000	26.000	21.000	18.000	18.000	
Chi Squares	.001	.087	.008	5.268	6.808	.196	1.564	.008	.268	.238	
Loving											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	120
Observed frequencies	21.000	18.000	24.000	19.000	23.000	13.000	25.000	20.000	19.000	23.000	
Chi Squares	.032	.268	.567	.090	.183	3.067	1.059	.016	.087	.390	
Neglecting											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	9.000	30.000	36.000	26.000	22.000	18.000	10.000	9.000	23.000	22.000	
Chi Squares	6.203	4.592	11.549	1.564	.044	.437	5.268	6.517	.348	.161	
Reward D=0											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	19.000	23.000	12.000	25.000	19.000	33.000	9.000	33.000	15.000	17.000	
Chi Squares	.070	.348	3.578	1.059	.196	6.803	6.335	7.492	1.400	.540	
Boys-Fathers (n = 205)											
Protecting											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	27.000	14.000	24.000	18.000	23.000	10.000	20.000	26.000	26.000	17.000	
Chi Squares	2.295	1.974	.567	.272	.183	5.787	.006	1.426	1.577	.504	

APPENDIX IX -- Continued

PCR Subtest		Class Intervals									
Punishment S-L											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	16.000	29.000	25.000	16.000	30.000	9.000	19.000	10.000	36.000	15.000	
Chi Squares	.870	3.691	.948	.932	3.822	6.884	.090	5.440	12.065	1.335	
Rejecting											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	13.000	25.000	28.000	27.000	18.000	21.000	19.000	14.000	13.000	27.000	
Chi Squares	2.561	1.069	2.673	2.168	.437	.000	.090	2.104	2.646	2.295	
Casual											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	20.000	17.000	16.000	19.000	25.000	37.000	18.000	18.000	18.000	17.000	
Chi Squares	.001	.547	1.020	.090	.748	12.121	.272	.323	.268	.505	
Reward S-L											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	19.000	16.000	23.000	25.000	22.000	24.000	15.000	16.000	24.000	21.000	
Chi Squares	.070	.924	.284	1.059	.044	.418	1.409	1.020	.660	.032	
Demanding											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	15.000	24.000	27.000	17.000	20.000	14.000	26.000	22.000	22.000	18.000	
Chi Squares	1.335	.660	2.001	.553	.050	2.351	1.564	.097	.136	.238	
Punishment D-O											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	18.000	28.000	14.000	21.000	15.000	25.000	31.000	21.000	16.000	16.000	
Chi Squares	.238	2.888	2.104	.020	1.730	.748	5.565	.008	.924	.870	

APPENDIX IX -- Continued

PCR Subtest		Class Intervals									
Loving											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	20.000	17.000	22.000	23.000	16.000	26.000	23.000	20.000	15.000	23.000	
Chi Squares	.001	.547	.097	.343	1.204	1.172	.343	.016	1.400	.039	
Neglecting											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	21.000	37.000	15.000	20.000	13.000	13.000	17.000	18.000	29.000	22.000	
Chi Squares	.032	13.655	1.513	.006	3.067	3.067	.553	.323	3.691	.161	
Reward D-O											
Expected frequencies	20.192	20.336	20.582	20.356	21.033	21.033	20.356	20.582	20.336	20.192	
Observed frequencies	24.000	17.000	14.000	20.000	26.000	15.000	24.000	24.000	25.000	16.000	
Chi Squares	.717	.547	2.104	.006	1.172	1.730	.652	.567	1.069	.870	
Girls-Mothers (n = 150)											
Protecting											
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025				
Observed frequencies	22.000	20.000	17.000	34.000	15.000	18.000	24.000				
Chi Squares	.194	.000	.465	.650	1.274	.222	.789				
Punishment S-L											
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025				
Observed frequencies	15.000	27.000	20.000	37.000	16.000	15.000	20.000				
Chi Squares	1.260	2.356	.000	1.844	.819	1.300	.000				
Rejecting											
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025				
Observed frequencies	19.000	27.000	25.000	27.000	19.000	12.000	21.000				
Chi Squares	.052	2.356	1.219	.230	.055	3.273	.047				

APPENDIX IX -- Continued

PCR Subtest		Class Intervals						
Casual								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	20.000	22.000	15.000	37.000	14.000	19.000	23.000	
Chi Squares	.000	.176	1.274	1.844	1.828	.061	.441	
Reward S-L								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	22.000	20.000	18.000	24.000	14.000	31.000	21.000	
Chi Squares	.194	.000	.210	1.062	1.828	5.890	.047	
Demanding								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	22.000	21.000	10.000	39.000	22.000	19.000	17.000	
Chi Squares	.194	.038	5.041	2.977	.188	.061	.456	
Punishment D-O								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	19.000	20.000	25.000	27.000	23.000	21.000	15.000	
Chi Squares	.052	.000	1.219	.230	.432	.038	1.260	
Leaving								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	17.000	17.000	15.000	36.000	19.000	33.000	13.000	
Chi Squares	.456	.482	1.274	1.378	.055	8.253	2.464	
Neglecting								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	13.000	25.000	26.000	41.000	14.000	13.000	18.000	
Chi Squares	2.464	1.186	1.762	4.381	1.828	2.516	.204	

APPENDIX IX -- Continued

PCR Subtest		Class Intervals					
Reward D-O							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	20.000	15.000	24.000	31.000	22.000	17.000	21.000
Chi Squares	.000	1.300	.776	.065	.188	.482	.047
Girls-Fathers (n = 150)							
Protecting							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	18.000	23.000	21.000	24.000	30.000	12.000	22.000
Chi Squares	.204	.413	.044	1.062	4.931	3.273	.194
Punishment S-L							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	19.000	25.000	26.000	32.000	12.000	16.000	20.000
Chi Squares	.052	1.186	1.762	.192	3.235	.841	.000
Rejecting							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	13.000	33.000	22.000	26.000	21.000	17.000	18.000
Chi Squares	2.464	8.253	.188	.440	.044	.482	.204
Usual							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	19.000	22.000	18.000	33.000	18.000	20.000	20.000
Chi Squares	.052	.176	.210	.388	.210	.000	.000
Reward S-L							
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025
Observed frequencies	19.000	19.000	23.000	30.000	14.000	25.000	20.000
Chi Squares	.052	.061	.432	.005	1.828	1.186	.000

APPENDIX IX -- Continued

PCR Subtest		Class Intervals						
Demanding								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	19.000	18.000	20.000	28.000	29.000	18.000	18.000	
Chi Squares	.052	.222	.000	.087	3.989	.222	.204	
Punishment D-O								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	18.000	31.000	17.000	19.000	23.000	19.000	23.000	
Chi Squares	.204	5.890	.465	3.801	.432	.061	.441	
Loving								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	20.000	28.000	9.000	35.000	16.000	18.000	24.000	
Chi Squares	.000	3.090	6.093	.981	.819	.222	.789	
Neglecting								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	16.000	30.000	28.000	23.000	16.000	15.000	22.000	
Chi Squares	.809	4.857	3.147	1.475	.819	1.300	.194	
Reward D-O								
Expected frequencies	20.025	20.115	20.055	29.610	20.055	20.115	20.025	
Observed frequencies	21.000	15.000	20.000	38.000	21.000	17.000	18.000	
Chi Squares	.047	1.300	.000	2.377	.044	.482	.204	

APPENDIX I

FREQUENCY DISTRIBUTIONS OF THOSE PCR SUBTESTS FOR WHICH HYPOTHESIS OF NORMALITY WAS REJECTED¹

PCR Subtest Configuration	Scores																	
	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Boys-Mothers																		
Pun. S-L	0	0	0	0	2	0	2	1	2	5	14	5	6	16	19	13	13	19
Neg.	0	0	0	0	0	3	2	4	7	14	9	13	10	13	13	13	14	8
Rew. D-G	1	0	3	1	1	1	4	2	4	2	2	12	9	5	7	8	17	9
Boys-Fathers																		
Pun. S-L	0	0	1	0	1	4	4	2	4	7	7	15	14	11	16	8	22	9
Neg.	0	0	0	0	0	4	1	4	3	9	12	5	3	17	7	8	5	8
Girls-Mothers																		
Low.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Neg.	0	0	0	0	0	8	2	3	4	11	10	12	7	7	11	15	7	8
Girls-Fathers																		
Rej.	0	0	0	0	0	2	1	8	2	10	8	6	6	3	3	13	6	5
Low.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Neg.	0	0	0	0	0	2	3	4	7	10	3	9	8	10	6	12	3	6

¹Table to be read left to right, for each PCR subtest, from first through last page.

APPENDIX X -- Continued

PCR Subtest Configuration	Scores																	
	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Boys-Mothers																		
Pun. S-L	20	15	13	6	11	4	6	3	1	1	6	0	0	0	1	0	0	0
Neg.	10	8	6	4	6	3	8	7	5	3	1	6	1	1	1	3	0	2
Rev. D-O	10	13	20	9	11	8	14	8	6	1	4	4	1	1	2	2	1	0
Boys-Fathers																		
Pun. S-L	16	3	10	12	11	13	6	1	2	3	0	1	0	1	0	0	0	0
Neg.	7	8	5	5	4	4	11	6	8	7	3	8	7	10	5	1	3	2
Girls-Mothers																		
Lov.	0	0	0	0	0	0	2	0	1	0	0	0	0	2	1	1	2	1
Neg.	9	3	2	3	6	4	5	1	0	1	0	4	2	0	0	1	0	0
Girls-Fathers																		
Rej.	2	4	9	6	8	9	4	9	3	5	0	2	2	0	0	2	2	1
Lov.	0	0	0	0	0	1	0	0	0	1	0	0	2	0	1	1	4	4
Neg.	7	7	4	9	3	4	1	9	1	7	1	1	4	2	0	2	0	1

APPENDIX X -- Continued

PCR Subtest Configuration	Scores																	
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Boys-Mothers																		
Pun. S-L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neg.	0	2	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Rev. D-O	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Boys-Fathers																		
Pun. S-L	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Neg.	3	2	1	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
Girls-Mothers																		
Lov.	1	3	2	5	5	5	2	0	2	8	5	4	8	14	5	5	6	7
Neg.	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Girls-Fathers																		
Rej.	1	1	0	3	0	1	0	0	2	0	0	0	0	0	0	0	0	1
Lov.	5	4	3	6	8	7	1	6	2	4	7	11	5	8	4	3	5	4
Neg.	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0

MODIFIED PARENT-CHILD RELATIONS QUESTIONNAIRE

RELATIONSHIP QUESTIONNAIRE

In this folder are a number of statements which describe different ways that parents act toward their children. Read each statement carefully and think how well it describes how YOUR parent acts toward YOU.

After each statement, there are 5 (five) responses which are labeled VERY UNTRUE, SEEMS TO BE UNTRUE, SOMETIMES UNTRUE – SOMETIMES TRUE, SEEMS TO BE TRUE, AND VERY TRUE. You are to select the response that you feel describes how YOUR parent acts toward YOU. This response should then be indicated on the separate answer sheet by blackening between the lines which lie below the response which you have selected.

For instance, if you feel that it is VERY TRUE that your father lets you go to parties or play with others more than usual as a reward (See A below), or if you feel that it is SOMETIMES TRUE – SOMETIMES UNTRUE that your mother takes away your toys or playthings when you are bad (See B below), you would mark your responses as indicated in the examples below.

STATEMENT FOUND IN FOLDER

Example A

My Father Lets me to to parties or play with others more than usual as a reward.	1	2	3	4	5
	Very Untrue	Seems to be Untrue	Sometimes Untrue Sometimes True	Untrue True	Seems to be true Very True

RESPONSES ON ANSWER SHEET

1 Very Untrue	2 Seems to be Untrue	3 Sometimes Untrue Sometimes True	4 Seems to be True	5 Very True

STATEMENT FOUND IN FOLDER

Example B

My Mother Takes away my toys or playthings when I am bad.	1	2	3	4	5
	Very Untrue	Seems to be Untrue	Sometimes Untrue Sometimes True	Untrue True	Seems to be True Very True

RESPONSES ON ANSWER SHEET

1 Very Untrue	2 Seems to be Untrue	3 Sometimes Untrue Sometimes True	4 Seems to be True	5 Very True

In marking your answers on the answer sheet, be sure that the number of the response agrees with the number of the statement.

Make your marks heavy and black. Erase completely any answer you wish to change.

Mark only one response to a statement.

DO NOT MAKE ANY MARKS ON THE FOLDER

My Mother

1. Tries to get me everything I want.
2. Complains about me to others when I do not listen to her.
3. Does not take into account my age.
4. Lets me spend my allowance any way I like.
5. Discusses what is good about my behavior and helps to make clear the desirable results of my action.
6. Punishes me hard enough when I misbehave to make sure that I won't do it again.
7. Takes away my toys or playthings when I am bad.
8. Is genuinely interested in my affairs.
9. Keeps forgetting things she is supposed to do for me.
10. Takes me places (trips, shows, etc.) as a reward.

1.	2	3	4	5
Very	Tends to	Sometimes	Untrue	Tends to
Untrue	be Untrue	Sometimes	Be True	Very
		True		True

My Mother

11. Spoils me.
12. Makes me feel ashamed or guilty when I misbehave.
13. Lets me know I am not wanted.
14. Sets very few rules for me.
15. Compares me favorably with other children when I do well.
16. Makes it clear that she is boss.
17. Slaps or strikes me when I misbehave.
18. Makes me feel wanted and needed.
19. Is too busy to answer my questions.
20. Relaxes rules and regulations as a reward.

1	2	3	4	5
Very	Tends to	Sometimes	Untrue	Tends to
Untrue	be Untrue	Sometimes	Be True	Very
		True		True

My Mother

21. Is very careful about protecting me from accidents.
22. Nags or scolds me when I am bad.
23. Thinks it is my own fault if I get into trouble.
24. Lets me dress in any way I please.
25. Tells me how proud she is of me when I am good.
26. Thinks I should always be doing something.
27. Takes away or reduces my allowance as punishment.
28. Makes me feel what I do is important.
29. Does not care if I get into trouble.
30. Gives me new books and records as rewards.

1	2	3	4	5
Very	Tends to	Sometimes	Untrue	Tends to
Untrue	be Untrue	Sometimes	Be True	Very
		True		True

	1	2	3	4	5
	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
My Mother					
31. Cannot bring herself to punish me.					
32. Punishes me by ignoring me.					
33. Does not spend any more time with me than necessary.					
34. Lets me off easy when I do something wrong.					
35. Treats me more like a grown up when I behave well.					
36. Pushes me to be the best in everything I try.					
37. Won't let me play with other children when I am bad.					
38. Encourages me to do things on my own.					
39. Pays no attention to what I am doing in school.					
40. Lets me stay up longer as a reward.					
My Mother	1	2	3	4	5
	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
41. Protects me from teasing or bullying by other children.					
42. Makes me feel I am not loved anymore if I misbehave.					
43. Does not want me to bring friends home.					
44. Gives me the choice of what to do whenever it is possible.					
45. Praises me before my friends.					
46. Tells me how to spend my free time.					
47. Spanks or whips me as punishment.					
48. Talks to me in a warm and affectionate way.					
49. Does not take me into consideration in making plans.					
50. Rewards me by letting me off some of my regular chores.					
My Mother	1	2	3	4	5
	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
51. Does not want me to play rough outdoor games for fear I might be hurt.					
52. Shames me before my friends when I misbehave.					
53. Disapproves of my friends.					
54. Lets me eat what I want to.					
55. Expresses greater love for me when I am good.					
56. Punishes me without any thought or understanding when I misbehave.					
57. Gives me extra chores as punishment.					
58. Tries to help me when I am scared or upset.					
59. Does not care whether I get the right kind of food.					
60. Gives me candy or ice cream or fixes my favorite foods for me as a reward.					

	1	2	3	4	5
	Very	Tends to	Sometimes Untrue	Tends to	Very
	Untrue	be Untrue	Sometimes True	Be True	True
My Mother					
61. Teaches me not to fight for any reason.					
62. Frightens or threatens me when I do wrong.					
63. Goes out of the way to hurt my feelings.					
64. Lets me do as I like with my time after school.					
65. Gives me special attention as a reward.					
66. Demands my complete respect and obedience.					
67. Punishes me by sending me out of the room or to bed.					
68. Does not try to tell me everything, but encourages me to find things out for myself.					
69. Leaves my care to someone else (a relative, etc.).					
70. Lets me go to parties or play with others more than usual as a reward.					

	1	2	3	4	5
	Very	Tends to	Sometimes Untrue	Tends to	Very
	Untrue	be Untrue	Sometimes True	Be True	True
My Mother					
71. Teaches me to go to my parents or teachers for help rather than to fight.					
72. Tells me how ashamed of me she is when I misbehave.					
73. Makes fun of me.					
74. Lets me choose my own friends.					
75. Praises me when I deserve it.					
76. Always tells me exactly how to do my work.					
77. Takes away my books or records as punishment.					
78. Respects my point of view and encourages me to express it.					
79. Acts as if I don't exist.					
80. Rewards me by giving me money or increases my allowance.					

	1	2	3	4	5
	Very	Tends to	Sometimes Untrue	Tends to	Very
	Untrue	be Untrue	Sometimes True	Be True	True
My Mother					
81. Would rather have me play at home than to visit other children.					
82. Compares me unfavorably with other children when I misbehave.					
83. Complains about me.					
84. Lets me work by myself.					
85. Makes me feel proud when I do well.					
86. Pushes me to do well in school.					
87. Punishes me by being more strict about rules and regulations.					
88. Lets me do things I think are important even if it is inconvenient for her.					
89. Pays no attention to me.					
90. Hugs or kisses or pets me when I am good.					

	1 Very Untrue	2 Tends to be Untrue	3 Sometimes Untrue Sometimes True	4 Tends to Be True	5 Very True
My Mother					
91. Doesn't let me go places because something might happen to me.					
92. Reasons with me and explains the possible harmful results when I do wrong things.					
93. Compares me unfavorably to other children no matter what I do.					
94. Does not object to my loafing or daydreaming.					
95. Praises me to others.					
96. Will not let me question her reasoning.					
97. Punishes me by not taking me on trips, visits, etc., that I have been promised.					
98. Tries to help me learn to live comfortably with myself.					
99. Ignores me as long as I do not do anything to disturb her.					
100. Gives me new things as a reward, such as a bicycle.					
My Mother					
101. Hates to refuse me anything.					
102. Thinks that it is bad for a child to be given affection and tenderness.					
103. Does not tell me what time to be home when I go out.					
104. Wants to have complete control over my actions.					
105. Is willing to discuss rules and regulations with me and takes my point of view into consideration in making them.					
106. Does not care who my friends are.					
107. Worries about me when I am away.					
108. Does not want me around at all when she has company.					
109. Does not object when I am late for meals.					
110. Teaches me that she knows best and that I must accept her decisions.					
My Mother					
111. Encourages me to bring friends home and tries to make things pleasant for them.					
112. Leaves me alone when I am upset.					
113. Will not let me try things if there is a chance I will fail.					
114. Expects children to misbehave if they are not watched.					
115. Is easy with me.					
116. Expects prompt and complete obedience.					
117. Teaches me skills I want to learn.					
118. Does not try to help me learn things.					
119. Wants to know all about my experiences.					
120. Believes a child should be seen and not heard.					

1	2	3	4	5
Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True

My Mother

121. Does not bother much about making me obey rules.
122. Keeps the house in order by having a lot of rules and regulations for me.
123. Makes it easy for me to ask her advice.
124. Forgets my birthday.
125. Does not want me to grow up.
126. Avoids my company.
127. Does not check up on whether I do my homework.
128. Allows me to make only minor decisions.
129. Says nice things about me.
130. Does not care whether I have the same kind of clothes as other children.

In this folder are a number of statements which describe different ways that parents act toward their children. Read each statement carefully and think how well it describes how YOUR parent acts toward YOU.

After each statement, there are 5 (five) responses which are labeled VERY UNTRUE, SEEMS TO BE UNTRUE, SOMETIMES UNTRUE – SOMETIMES TRUE, SEEMS TO BE TRUE, AND VERY TRUE. You are to select the response that you feel describes how YOUR parent acts toward YOU. This response should then be indicated on the separate answer sheet by blackening between the lines which lie below the response which you have selected.

For instance, if you feel that it is VERY TRUE that your father lets you go to parties or play with others more than usual as a reward (See A below).

STATEMENT FOUND IN FOLDER

Example A

My Father Lets me to to parties or play with others more than usual as a reward.

1	2	3	4	5
Very Untrue	Seems to be Untrue	Sometimes Untrue Sometimes True	Seems to be true	Very True

RESPONSES ON ANSWER SHEET

1 Very Untrue	2 Seems to be Untrue	3 Sometimes Untrue Sometimes True	4 Seems to be True	5 Very True

Mark only one response to a statement.

DO NOT MAKE ANY MARKS ON THE FOLDER

My Father

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

1. Tries to get me everything I want.
2. Complains about me to others when I do not listen to him.
3. Does not take into account my age.
4. Lets me spend my allowance any way I like.
5. Discusses what is good about my behavior and helps to make clear the desirable results of my action.
6. Punishes me hard enough when I misbehave to make sure that I won't do it again.
7. Takes away my toys or playthings when I am bad.
8. Is genuinely interested in my affairs.
9. Keeps forgetting things he is supposed to do for me.
10. Takes me places (trips, shows, etc.) as a reward.

My Father

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

11. Spoils me.
12. Makes me feel ashamed or guilty when I misbehave.
13. Lets me know I am not wanted.
14. Sets very few rules for me.
15. Compares me favorably with other children when I do well.
16. Makes it clear that he is boss.
17. Slaps or strikes me when I misbehave.
18. Makes me feel wanted and needed.
19. Is too busy to answer my questions.
20. Relaxes rules and regulations as a reward.

My Father

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

21. Is very careful about protecting me from accidents.
22. Nags or scolds me when I am bad.
23. Thinks it is my own fault if I get into trouble.
24. Gives me as much freedom as I want.
25. Tells me how proud he is of me when I am good.
26. Never lets me get away with breaking a rule.
27. Takes away or reduces my allowance as punishment.
28. Makes me feel what I do is important.
29. Does not care if I get into trouble.
30. Gives me new books or records as rewards.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes	True	

My Father

31. Believes I should have no secrets from my parents.
32. Punishes me by ignoring me.
33. Does not spend any more time with me than necessary.
34. Lets me off easy when I do something wrong.
35. Treats me more like a grown up when I behave well.
36. Pushes me to be the best in everything I try.
37. Won't let me play with other children when I am bad.
38. Encourages me to do things on my own.
39. Pays no attention to what I am doing in school.
40. Lets me stay up longer as a reward.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes	True	

My Father

41. Protects me from teasing or bullying by other children.
42. Makes me feel I am not loved anymore if I misbehave.
43. Does not want me to bring friends home.
44. Gives me the choice of what to do whenever it is possible.
45. Praises me before my friends.
46. Tells me how to spend my free time.
47. Spanks or whips me as punishment.
48. Talks to me in a warm and affectionate way.
49. Does not take me into consideration in making plans.
50. Rewards me by letting me off some of my regular chores.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes	True	

My Father

51. Does not want me to play rough outdoor games for fear I might be hurt.
52. Shames me before my friends when I misbehave.
53. Disapproves of my friends.
54. Expects me to take everyday disappointments.
55. Expresses greater love for me when I am good.
56. Punishes me without any thought or understanding when I misbehave.
57. Gives me extra chores as punishment.
58. Tries to help me when I am scared or upset.
59. Does not care whether I get the right kind of food.
60. Gives me candy or ice cream or fixes my favorite foods for me as a reward.

	1	2	3	4	5
My Father	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
61. Makes others give in to me.					
62. Frightens or threatens me when I do wrong.					
63. Goes out of the way to hurt my feelings.					
64. Lets me stay up as late as I like.					
65. Gives me special attention as a reward.					
66. Demands my complete respect and obedience.					
67. Punishes me by sending me out of the room or to bed.					
68. Does not try to tell me everything, but encourages me to find things out for myself.					
69. Leaves my care to someone else (a relative, etc.).					
70. Lets me go to parties or play with others more than usual as a reward.					

	1	2	3	4	5
My Father	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
71. Teaches me to go to my parents or teachers for help rather than to fight.					
72. Tells me how ashamed of me he is when I misbehave.					
73. Makes fun of me.					
74. Lets me do pretty much what I want to do.					
75. Praises me when I deserve it.					
76. Always tells me exactly how to do my work.					
77. Takes away my books or records as punishment.					
78. Respects my point of view and encourages me to express it.					
79. Acts as if I don't exist.					
80. Rewards me by giving me money or increases my allowance.					

	1	2	3	4	5
My Father	Very Untrue	Tends to be Untrue	Sometimes Untrue Sometimes True	Tends to Be True	Very True
81. Wants me to have at least as large an allowance as my friends.					
82. Compares me unfavorably with other children when I misbehave.					
83. Complains about me.					
84. Lets me work by myself.					
85. Makes me feel proud when I do well.					
86. Pushes me to do well in school.					
87. Punishes me by being more strict about rules and regulations.					
88. Lets me do things I think are important even if it is inconvenient for him.					
89. Pays no attention to me.					

My Father

91. Tries to keep me out of situations that might be unpleasant and embarrassing.
92. Reasons with me and explains the possible harmful results when I do wrong things.
93. Compares me unfavorably to other children no matter what I do.
94. Does not object to my loafing or daydreaming.
95. Praises me to others.
96. Will not let me question his reasoning.
97. Punishes me by not taking me on trips, visits, etc., that I have been promised.
98. Tries to help me learn to live comfortably with myself.
99. Ignores me as long as I do not do anything to disturb him.
100. Gives me new things as a reward, such as a bicycle.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

My Father

101. Hates to refuse me anything.
102. Thinks that it is bad for a child to be given affection and tenderness.
103. Does not tell me what time to be home when I go out.
104. Wants to have complete control over my actions.
105. Is willing to discuss rules and regulations with me and takes my point of view into consideration in making them.
106. Does not care who my friends are.
107. Worries about me when I am away.
108. Does not want me around at all when he has company.
109. Does not object when I am late for meals.
110. Teaches me that he knows best and that I must accept his decisions.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

My Father

111. Encourages me to bring friends home and tries to make things pleasant for them.
112. Leaves me alone when I am upset.
113. Worries a great deal about my health.
114. Expects children to misbehave if they are not watched.
115. Is easy with me.
116. Expects prompt and complete obedience.
117. Teaches me skills I want to learn.
118. Does not try to help me learn things.
119. Wants to know all about my experiences.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Untrue	Be True	True
		Sometimes		
		True		

My Father

121. Does not bother much about making me obey rules.
122. Is full of advice about everything I do.
123. Makes it easy for me to ask his advice.
124. Forgets my birthday.
125. Does not want me to grow up.
126. Avoids my company.
127. Does not check up on whether I do my homework.
128. Allows me to make only minor decisions.
129. Says nice things about me.
130. Does not care whether I have the same kind of clothes as other children.

1	2	3	4	5
Very	Tends to	Sometimes	Tends to	Very
Untrue	be Untrue	Sometimes True	Be True	True