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PREFERENCES AMONG PARENTS AND CHILDREN AND
PARENTAL ATTITUDES

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The purpose of this study was to explore the relationships between the similarity of food preferences among parents and children, and parent attitudes.

Thirty-five children of preschool ages and their parents served as subjects for this study. All children were enrolled in preschool programs established by the Family Life Department at Oregon State University.

A Picture Food Preference Inventory (PFPI), designed for this study was used to obtain the food preference similarity scores of children and their parents. A modified version of the Parental Attitude Research Instrument (PARI) was used to measure parent attitudes.

The Pearson Product-Moment Correlation Method was used to test all hypotheses generated in this study. In addition, descriptive

analyses were employed to explore the food preference similarity and dissimilarity among children and their parents.

Generally, findings revealed that mothers' democratic attitudes seem related to boy-father and boy-mother food preference similarity, while fathers' authoritarian-control attitudes seem related to girl-father and girl-mother food preference similarity.

A study of the food preference similarity and dissimilarity of children and their parents indicated that the percentage similarity of likes predominated over all food groups studied. The percentage similarity of dislikes occupied a very small proportion of the food preferences of children and their parents. Furthermore, the fruit food group contained the highest percentage similarity of likes, while the vegetable group contained the highest percentage dissimilarity. Still also, boys generally had a higher percentage similarity of likes with their parents, than did girls.

Attempts were made to relate all findings to both previous research in the area of parent-child food preference similarity and parent attitudes, and various theoretical positions on identification. A discussion of these results indicated that no one theoretical position on identification could be used to explain these data. Furthermore, these findings suggested that future studies on the relationship between parent-child food preference similarity and parent attitudes and discussions on identification, focus attention on the variables of sex

of child and sex of parents in their investigations. Limitations of the study and suggestions for further research were discussed.

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
Purpose of the Study	7
Definition of Terms	7
Assumptions	8
Hypotheses	8
REVIEW OF LITERATURE	10
A History of the Study of Children's Food Preferences	10
The Measurement of Food Preferences	15
The Nature of Food Preferences Among Preschool Children	18
Parental Influences on the Development of Food Preferences	20
A Theoretical Framework	28
METHOD	34
Subjects	34
Description of the Children	35
Age and Sex	35
I. Q.	36
Socioeconomic Status	36
Instruments	37
Picture Food Preference Inventory (PFPI)	38
Reliability	39
Validity	40
Parental Attitude Research Instrument (PARI)	44
Reliability	46
Validity	47
Procedure	49
Establishment of Rapport	49
Administration of the PFPI to Children	50
Administration of the PFPI to Parents	52
Administration of the PARI to Parents	54
RESULTS	55
Tests of Hypotheses	56
Hypothesis I	56
Hypothesis II	57
Hypothesis III	60
Hypothesis IV	62
Additional Findings	64

	<u>Page</u>
SUMMARY AND DISCUSSION	71
Summary	71
Hypothesis I	75
Hypothesis II	75
Hypothesis III	75
Hypothesis IV	76
Additional Findings	77
Discussion	78
Relationship of Findings to Previous Research: Parent-Child Food Preference Similarity and Parent Attitudes	78
Relationship of Findings to Theoretical Positions on Identification	81
Hypothesis I	81
Hypothesis II	84
Hypothesis III	85
Hypothesis IV	86
Summary	89
Additional Findings: Food Preferences Among Young Children	90
Limitations of the Study	92
Sample	92
Childrens' Picture Food Preference Inventory	93
Parents' Picture Food Preference Inventory	94
Parental Attitude Research Instrument	96
Control of Variables	97
Suggestions for Further Research	98
 BIBLIOGRAPHY	 100
 APPENDICES	 108

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Description of Children by Sex, Age, and I. Q.	35
2	Description of Families by Socioeconomic Status	37
3	Results of Pilot Study: Identification of Food Items in the PFPI	42
4	A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Boy-Father Food Preference Similarity and Fathers' and Mothers' Attitudes	58
5	A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Boy-Mother Food Preference Similarity and Fathers' and Mothers' Attitudes	59
6	A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Girl-Father Food Preference Similarity and Fathers' and Mothers' Attitudes	61
7	A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Girl-Mother Food Preference Similarity and Fathers' and Mothers' Attitudes	63
8	Average Percentage Similarity of Likes, Similarity of Dislikes, and Dissimilarity for Parent-Child Groupings According to Basic Food Groups	65
9	Comparison of Boy-Parent Food Preference Similarity and Dissimilarity and Girl-Parent Food Preference Similarity and Dissimilarity	68
10	Comparison of Father-Child Food Preference Similarity and Dissimilarity and Mother-Child Food Preference Similarity and Dissimilarity	70
11	Summary of the Significant Findings and Trends Related to Hypotheses I, II, III, IV	74

RELATIONSHIP BETWEEN THE SIMILARITY OF FOOD PREFERENCES AMONG PARENTS AND CHILDREN AND PARENTAL ATTITUDES

INTRODUCTION

Food preferences of the young child are of importance in research because they affect the child's consumption of the essential nutrients required for growth and development. Food preferences have been shown to be adequate predictors of consumption (Pilgrim, 1957) and thus have been widely implicated as an important variable in the nutritional adequacy of the diet (Leverton and Coggs, 1951; Eppright, 1947; Lewin, 1943; Litman, Cooney and Stief, 1964; Lund and Burke, 1969; Schuck, 1961). In addition, research studies indicate that the nutritional adequacy of the diet affects growth and development of young children in a variety of ways (Eppright, 1955; Scrimshaw, 1963; Cravioto, 1964). For example, evidence indicates that protein-calorie malnutrition in the preschool child may retard biochemical as well as physical indices of maturation, and there is increasing evidence that even moderate forms of malnutrition are associated with decelerated mental development and psychological disturbances (Cravioto, 1964). These studies and others (Breckenridge, 1959; Glaser, 1957; Lamb, 1969) substantiate the need for studying the food preferences of individuals, particularly of young children, as a means for improving nutrition and enhancing growth and development.

The apparent effect of food preferences upon growth and development requires consideration of the normative aspects of children's food preferences. The early development of food preference is well supported in the literature. Ilg (1948) found that definite preferences for specific foods occur by age 21 months. Other studies support the finding that food preferences are a part of the attitudinal repertoire of children under six years of age (Dierks and Morse, 1965; Escalona, 1945; Glaser, 1957; Lamb and Ling, 1946; Lowenberg, 1958; McCarthy, 1935). In reference to the nature of the preschool child's food preferences, Ilg (1948) observed that although food preferences varied among different children, similar eating patterns emerged in different children at the same age. Ilg reported predictable generalizations of what and how the child eats at different age levels from 21 months to 11 years. Although definite preferences remained, the extreme feelings toward likes and dislikes were found to lessen with age. Lamb and Ling (1946) and McCarthy (1935) also observed a tendency toward less intense likes and dislikes with increasing age during the years from two to seven. Furthermore, several studies indicate that there is a major commonality of food preferences among children of preschool ages. This commonality appears to be the general disliking of vegetables (Bryan and Lowenberg, 1958; Dierks and Morse, 1965; Glaser, 1957; Lamb and Ling, 1946; Vance and Temple, 1933).

The knowledge of the role of food preferences in food consumption behavior has led investigators to search for variables contributing to the establishment of these preferences. Pilgrim (1957) defines food preferences as "consumption with pleasure" and devised a model for categorizing the contributing components of the establishment of food preferences. These components included physiological, sensory, and attitudinal factors. All three components appear to contribute to the development of food preferences, however, while the actual preference and consumption of a food item depends on an immediate, favorable sensation, before one is even tempted to try a food, a number of recent and past events may conspire to influence the organism. Some of these events may emerge from within the individual while others may come from the environment.

Interest in the attitudinal component of food preferences has stimulated a wide variety of research studies. Of interest in the present study are those which focus on the relationship between parent attitudes and similarity of food preferences among parents and their children. Only one study was found related directly to this topic. Bryan and Lowenberg (1958) studied the food preference similarities of 61 preschool aged children and their fathers in relation to specific attributes of the father concerning his role in discipline and family eating patterns. No significant associations were found between the food preferences of fathers and their children, although both generally

disliked the vegetable group. Furthermore, no significant associations were found between any of the father attributes and food preference similarities between fathers and their children.

Although parent attitudes have not been included as variables, other studies are present which indicate that a positive relationship may exist between food preferences of parents and those of their children. The influence of parental food preferences on those of the child was explored by Metheny et al. (1962) in a study of 104 children between the ages of two and five years. All of the foods unfamiliar to both parents were unfamiliar to the child of the family. Also, in all but ten instances foods disliked by both parents were either disliked by the child or were unfamiliar to him. In a study of 48 children aged two to seven years, McCarthy (1935) found that food dislikes of the family were associated with 35 percent of the food dislikes of the children. Lewin (1943) and Schuck (1961) have also found indications of parent-child similarities in food preferences. While studying young children being cared for in a prison nursery, Escalona (1945) observed similar juice preferences between babies under four months and their individual caretakers.

Although the majority of studies concerning the similarity of food preferences between children and those of their parents have not attempted to relate parent attitude variables, there are studies available which suggest that parental attitudes may be related to food

preferences in general. In a study of 76 mothers and their preschool children, Baldwin (1944) found parental attention and affection to be positively related to a wide acceptance of food among preschool children. Hellersberg (1946) found the family pattern of adaptability to be an important factor in the development of positive food patterns as measured by food acceptance in adolescents. Other investigators have attempted to find links between family influences and food habits (Hinton et al., 1963; Lamb, 1969; Litman, Cooney and Steif, 1964; Schuck, 1961). These studies have included variables such as family relationships and mealtime patterns. Other measures of parental attitudes as related to children's food preferences have been indirectly approached through the study of food preferences of the individual and his psychological adjustment (Altus, 1949; Smith, Powell, and Ross, 1955; Wallen, 1945, 1948). These investigators have found positive relationships between neurotic tendencies and food aversions and have attempted to describe these findings in terms of a neuroses-producing early family environment as a factor in food preference behavior.

No theoretical framework is present relating parent attitudes to similarity of food preferences among children and their parents. However, a variety of theories of identification are available that suggest such a relationship may exist. Theories of personality place importance upon identification as the mechanism by which a child

imitates, models, or introjects the behavior of his parents and thereby incorporates these traits into his own personality. Although there is agreement in the defining characteristics of identification, the various theories diverge in their emphasis upon the antecedent conditions leading to identification. Three variables have frequently been hypothesized as affecting identificatory learning: parental nurturance (Sears, 1957; Whiting and Child, 1953; Bandura and Walters, 1963), parental punitiveness (Bronfenbrenner, 1960; Mower, 1950), and parental power (Bandura, Ross, and Ross, 1963; Maccoby, 1959).

Although these three variables of parental nurturance, parental punitiveness, and parental power are well grounded in theories of identification, the importance of the sex of the parent and the sex of the child has received relatively little attention. Recently, however, Lynn (1962) has hypothesized that sex differences do affect both the nature of parental identification and the process of achieving such identification. Lynn postulated that the girl learns specific mother identification while the boy learns a cultural role identification. Although both male and female infants initially identify with their mothers, boys eventually shift to a cultural role identification through a system of rewards and punishments from their mothers and female teachers. Johnson (1963) has also postulated that both males and females initially identify with the mother. However, emphasis is placed on the later importance of the father on the identification process for both males and females. Both sexes are hypothesized to identify with the father

as he dispenses rewards and punishments for appropriate role behavior.

Thus, in exploring the variables relating to parent-child food preference similarities within a theoretical framework of identification, the sex of parent and sex of child assume considerable importance.

Purpose of the Study

The purpose of the present study is to explore the relationship between the similarity of food preferences among parents and children, and parental attitudes.

Definition of Terms

1. **Food preferences:** as measured by the Picture Food Preference Inventory (PFPI) designed for this study, operationally defined as representing both likes and dislikes of food items.
2. **Similarity of food preferences:** operationally defined as the degree to which food likes and dislikes of children match those of their parents.
3. **Parental attitudes:** as measured by the modified version of the Parental Attitude Research Instrument (PARI), operationally defined in terms of responses of parents to statements about child rearing.

Assumptions

1. The Picture Food Preference Inventory (PFPI) can be used to measure food preferences of preschool children and those of their parents (Bryan and Lowenberg, 1958; Metheny et al., 1962; Leverton and Coggs, 1951).
2. The Parental Attitude Research Instrument (PARI) is an adequate measure of child rearing attitudes among parents of preschool children (Emmerich, 1969).

Hypotheses

- Hypothesis I: There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their fathers.
- Hypothesis II: There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their mothers.
- Hypothesis III: There will be no significant relationships between parent attitudes and similarity of food preferences among girls and their fathers.
- Hypothesis IV: There will be no significant relationships

between parent attitudes and similarity of food preferences among girls and their mothers.

REVIEW OF LITERATURE

This review of literature is organized in terms of pertinent components of the hypotheses to be investigated. These include a history of the study of children's food preferences, the measurement of food preferences, the nature of food preferences among preschool children, parental influences on the development of these preferences, and a theoretical framework regarding the relationship between parent-child food preference similarity and parental attitudes.

A History of the Study of Children's Food Preferences

During the years following World War I, there emerged among persons in the United States a great interest in the welfare of young children and the belief in the importance of early experiences in the growth and development of a child (Frank, 1961). Studies of children began to focus upon child care in an attempt to develop new patterns of child rearing. It was in 1918, however, when the United States Children's Bureau conducted its Children's Year Campaign, that nutrition studies focused upon the preschool aged child (Roberts, 1935). This campaign was undertaken as a war measure and provided for a nation wide check-up of children's physical health. Data obtained from surveys conducted during this time on the nutrition and health conditions of preschool children revealed the need for increased emphasis

on nutrition programs to help better the nutritional status of children in the United States.

Although the nursery school was to become a valuable setting for the needed education and further research in child nutrition, there were only three nursery schools and no child guidance clinics in the United States during the early 1920's (Frank, 1961). The only child research centers at this time were the Yale Psycho-Clinic (1911), under the direction of Dr. Arnold Gesell, and the Iowa Child Welfare Research Station (1917), under the direction of B. T. Baldwin. Both of these research centers were limited in scope and function and neither had a nursery school laboratory. However in 1922, the Merrill-Palmer Schools (now known as the Merrill-Palmer Institute) opened its doors and a nursery school was established for the study of child development, child rearing practices, early education, and family education. It was at this institute that the first systematic and intensive study of the nutrition of infants and children under the direction of Dr. Icie Macy Hoobler began. These studies provided the first basic understanding of the child's nutritional needs and how he handles his food intake. Aside from these studies, a series of other exploratory programs on children's eating patterns and food preferences were also conducted.

The late twenties and early thirties experienced a growth in university child development centers in the United States. The child

research centers at Yale and Iowa were enlarged and new child research centers were established. These years witnessed a widespread and sustained effort to study the development of children and to communicate what was being found by investigators to parents and teachers. Aside from the growth of these child development and research centers, nursery schools connected to them also emerged. The rapid growth of nursery schools during this era was evidenced by the fact that the years from 1920 to 1930 showed an increase from 4 to 500 nursery schools (Roberts, 1935). These first nursery schools were for the most part connected with colleges and universities and had curricular objectives primarily concerned with habit training and the promotion of physical health (Sears and Dowley, 1963). The nutrition and feeding problems arising among children in these nursery school settings gained the attention of researchers and methods for improving eating habits came into focus. Nutritionists recognized these problems and the nursery school became an effective agency for the betterment of children's nutrition through health services, parent education, daily routines, and the noon lunch programs (Roberts, 1935).

During the depression years of the 1930's federal legislation and support provided the means for a second major growth spurt in the nursery school movement. Through the Work Progress Administration Act, nursery schools were established throughout the United States,

in part to employ teachers out of work. The curriculum of these nursery schools continued to stress physical health with a strong emphasis on nutrition. The teaching of "good" eating habits was emphasized, particularly in federally supported nursery schools in which surplus foods were made available as a by-product of a government program of economic support for farmers.

The war years brought still another spurt in the growth of nursery schools. Through the Lanham Act, funds were provided for the establishment of day care centers in the United States. These day care centers were established to provide facilities for the caring of young children while their mothers went to work in strategic war industries to help meet the shortage of man power created by the war. However, with the longer hours children spent in these day care centers, and the separation of children from their parents at so young an age, teachers began to become aware of a variety of social and emotional difficulties these children were experiencing. These caused teachers to re-evaluate the curriculum focused on physical health and nutrition and to develop a curriculum that considered the child's social and emotional development. Researchers, likewise, refocused their research efforts toward an emphasis on the social and emotional aspects of child growth and development. It becomes apparent, therefore, that much research on children's food preferences, nutrition, and eating behavior was carried on in the 1930's and 1940's, when nursery education was

relatively young and the focus of these educational programs was upon physical health.

With the 1950's another shift in emphasis regarding the education and development of young children emerged. Increased national focus upon scientific progress led to changes in child rearing practices including a greater emphasis upon children's achievement training. This shift in emphasis along with creative insights into the thought processes of children and the variables affecting them combined to create an unprecedented concern for children's intellectual development (Evans, 1971).

The 1960's, however, brought renewed stress upon the importance of physical and social aspects of child growth and development. As a result of federal legislative support to minimize poverty, Project Head Start was conceived, and preschool programs for children from impoverished circumstances were established. These programs provided the impetus for further nutrition research, as Project Head Start became a multi-disciplinary enterprise including education, medical-dental care, nutrition, social services, psychological services, parent education, and the involvement of community volunteers (Evans, 1971).

This brief history may in part account for the number of references in the present study on children's food habits and preferences which date to the thirties and forties. Renewed emphasis upon

nutrition research with children, and analysis of children's food consumption behavior, however, has been apparent in recent years and continues to receive interest and support today.

The Measurement of Food Preferences

A review of literature regarding the study of food preferences among young children reveals that food preference inventories have been used extensively in various fields of study. An understanding of children's food preferences can be of value both to those who plan and supervise the feeding of children, and to those who are involved in the dynamics of promoting sound food habits. Studies of food preferences have been made with subjects of differing ages and have incorporated various methods. Varying numbers and kinds of foods have been included with different criteria used to designate preference. One general method found in the literature consists of having the subjects complete a food checklist, with or without an accompanying interview. Wallen (1943) designed such a checklist with the criteria of preference being refusal to eat because of dislike, and never eaten. The instructions ruled out the effects of various ways of preparing the same food and focused attention on the food itself. Smith, Powell, and Ross (1955) and Hall and Hall (1939) used a similar procedure. Pilgrim (1961) measured food preferences by having subjects check foods according to nine categories from like extremely to dislike extremely. Similarly,

Leverton and Coggs (1951) and Davids and Lawton (1961) measured food preferences of school children according to these categories, but incorporated the "never tasted" category as a possible choice. The number of food items used in these studies ranged from 20 to 150.

A second general method apparent in the literature is that of interviewing mothers concerning the food preferences of their children. McCarthy (1935) gathered data on children's food preferences by interviewing mothers to determine whether their children liked, were indifferent to, disliked but ate, refused to eat, or were never offered each of the 72 foods studied. Bryan and Lowenberg (1958) also obtained data on children's food preferences by interviewing mothers. In this study, however, the food list included only 36 items and the criteria of preference were limited to liked, accepted, or refused to eat.

A third method of obtaining data on food preferences consists of observing children during mealtime. Vance and Temple (1935) gathered data on food preferences of nursery school children through direct observation of children during mealtimes. Order of tasting, finishing, whether or not urged, whether or not given extra servings of each food on the menu, and reactions to food were recorded. Lamb and Ling (1946) also studied the preferences of preschool children by direct observation. Records of food consumption and preference were taken simultaneously for one week at three month intervals for a total

of five experimental weeks while utilizing a five point rating scale. The categories on the rating scale included the affective responses of very pleasant, pleasant, neutral, unpleasant, and very unpleasant.

Several investigators have created extensive questionnaires to probe food preferences of young children and have explored the motivational and attitudinal dimensions of these preferences. Lewin (1943) used an indirect projective approach with school children which revealed specific foods eaten daily, foods with "praise" or "scold" value and foods in a "good" or a "poor" meal. More recently, Litman, Cooney, and Stief (1964) conducted an exploratory study which utilized Lewin's projective approach and extended it to a larger population. Hellersberg (1946) developed a food pattern score based on questions concerning food preferences, aversions, motivations for extreme likes and dislikes, and whether or not eating a disliked food would have a bad effect.

In the present study a Picture Food Preference Inventory, which combines the checklist technique of scaled responses with a picture of the food item itself, is used. This type of instrument allows for enhanced communication with preschool children so that food preference information may be obtained directly from them.

The Nature of Food Preferences
Among Preschool Children

The appearance of food preferences early in life has been well established through a variety of research studies. Based on experience in the guidance of children over a period of 15 years, coupled with records of mothers' reports about their children's feeding patterns, Ilg (1948) has provided us with normative data regarding children's eating behavior over the ages 21 months to 11 years. Ilg found definite food preferences occurring among children by age 21 months, and also indicated that this was the age when most mothers reported they experienced feeding problems with their children. In this same study by two years of age it was found that children began to name foods and exhibited an ability to more clearly indicate their wants. At two and one-half, real food jags (i. e. , demanding the same food day after day) emerged. By three years of age a temporary reprieve from the over-channelized desires of the previous period occurred and the children seemed to accept a greater variety of foods. At four years of age, however, food jags again emerged and in addition, children went on food strikes. From four years of age on, although definite preferences exist, an increasing neutralization of strong food preferences with age occurred.

Lamb and Ling (1946) also reported a similar tendency toward less intense food likes and dislikes with age. In this study, eight

subjects aged two to three years were observed over a period of one year. Food consumption and preference records were taken simultaneously for one week at three month intervals. Observers' ratings on a five point scale indicated the affective concomitant. With all subjects, total pleasant affective responses to foods at all testings predominated over neutral and unpleasant responses combined. These data indicated that the preschool child has learned to like a wide variety of foods. When comparing scores over the year, the frequency of responses indicated that very pleasant and very unpleasant affective responses decreased with age. In a cross-sectional study, McCarthy (1935) observed a similar trend. Food preference records of 48 children aged two to seven were obtained from their mothers. A tendency away from strong food likes and dislikes was apparent with increased age.

Several investigators have observed a common disliking for vegetables among children. In a study of food preferences of 115 children aged two to six, 22 specific vegetables were refused by one or more children, and 14 children refused all vegetables (Dierks and Morse, 1965). In a study of father-child similarity of food preferences, Bryan and Lowenberg (1958) found that both fathers and their children disliked foods from the vegetable group. Other investigators studying food preferences of children within the age range of two to six years have also substantiated the unpopularity of vegetables (Glaser, 1957; Lamb and Ling, 1946; Vance, 1933). Furthermore,

Van Duyne (1963) not only found vegetables to be least liked among the 43 nursery school children studied, but also found that these dislikes were influenced by the method of preparing or serving them. The results indicated that children prefer simply prepared foods, with boiling and buttering being the best-liked method of nine of the twelve cooked vegetables tested.

Parental Influences on the Development of Food Preferences

The attitudinal bases of food preferences have been the subject of many investigations. Pilgrim (1957), in attempting to construct a model for depicting a large variety of variables influencing the development of food preferences, found that these variables could be organized into three major contributing components. These components mutually interact and include the physiological, sensory, and attitudinal components.

Food preferences are undoubtedly influenced by the physiological state of the organism. For example, according to Pilgrim's model, a relatively stable factor affecting the physiological component of food preferences is endocrine balance. An intermittent or non-stable factor would be the metabolic changes occurring within the organism following the ingestion of food.

Food preferences are also influenced by the sensory experiences produced by the food. Observations of young children (Lowenberg, 1948; Van Duyne, 1963) confirm the importance of flavor, texture, and temperature of foods in the establishment of food preferences. Lowenberg (1948) found that children tend to dislike strong flavors, dry textures, and extreme temperatures.

Furthermore, food preferences are influenced by a variety of attitudinal factors. These attitudinal factors may be both general and food specific. For example, disliking that which is different may be an attitude which generalizes to include food (Pilgrim, 1957). Likewise, food-specific attitudes may emerge from early associations with the specific food item. Glaser (1957) observed atmosphere and pleasant experiences with new foods to be important influences in the establishment of food preferences among 16 children aged three to five years. A preliminary investigation of the eating habits of these children revealed that the children generally resisted tasting new foods, resisted eating vegetables, and disliked milk, meat, and eggs. Upon completion of an experimental treatment designed to encourage the tasting of new and unfamiliar foods, a much greater variety of foods was accepted. Other investigators support the contention that early experiences exert a strong influence on the expressed food preferences of children (Davids and Lawton, 1958; Lewin, 1943; Schuck, 1961).

The component of early experiences which is of major interest in the present study is that of parent attitudes. Of particular interest are those studies which focus on the relationship between parent attitudes and children's food preferences. More specifically, the present study is concerned with the relationship between parent-child similarities of food preferences and parent attitudes. Only one study was found related directly to this topic. Bryan and Lowenberg (1958) studied the relationship between food preferences of fathers and their preschool children. Thirty-six commonly served foods were rated according to categories of like, accept, and refuse by 61 children, aged two years - eleven months, to four years - eleven months, and their fathers. The children's food preferences were obtained from their mothers, and the fathers' food preferences were obtained directly from a personal interview with them. Information was also obtained on the father's participation in the discipline of the child, his expectations about the variety of foods the child should eat, his own eating behavior, his expression of likes and dislikes in front of the child, and his enjoyment of food. No significant relationships were found between the food preferences of fathers and their children, except for the finding that foods in the vegetable group were disliked by both. Also, no significant association was found between any of the father attributes and food preference similarities between fathers and their children.

Other studies are present, however, which indicate that a positive relationship may exist between food preferences of parents and those of their children, although parent attitudes have not been included as variables. In a study of 104 children, aged two to five years, Metheny et al. (1962) found similarities of food preferences between parents and their children. The child's, the father's, and the mother's attitudes toward 35 specific foods were judged by the mother. All of the foods unfamiliar to both parents were unfamiliar to the child of the family. Also, in all but ten instances, foods disliked by both parents were either disliked by the child or were unfamiliar to him. In a still earlier study of 48 children, aged two to seven years, McCarthy (1935) found that food dislikes of the family were associated with 35 percent of the food dislikes of the children. When the children were divided into a "feeding problem" group and a "non-feeding problem" group, so identified by their mothers or by nursery school records, it was found that in the problem group, 47 percent of the foods disliked or refused by some member of the family were also disliked or refused by the child. In the non-feeding problem group, only 27 percent of the family food dislikes corresponded to those of the child. In a further analysis of these data, using the child's total number of dislikes plus refusals as 100 percent, it was revealed that in the problem group only 30 percent of the child's food dislikes were paralleled by identical dislikes on the part of some member of the

family, while the corresponding percentage for the non-problem group was 41 percent. According to the results of these two analyses, the problem group showed a greater similarity of food preferences with their family members than the non-problem group. In addition, they had a larger number of food dislikes that were unique or peculiar to them.

Further evidence for parent-child similarities in food preferences come from a variety of other investigations available. Schuck (1961) in a study of the food preferences of college age students, found that the food preferences of these students reflected the food practices of the homes in which they were reared. A checklist of 61 foods was administered to a sample of 120 college students. Surveys of diets of homemakers from the same geographical areas as the students were analyzed for comparison. Foods most frequently reported as eaten by the homemakers were often found to be the most popular among the college students. Furthermore, Lewin (1943) utilizing an indirect projective approach for exploring children's food attitudes found evidence for parent-child food preference similarity. Lewin's projective device was devised during World War II and later pretested among 2300 Iowa school children. The unstructured questionnaire revealed specific foods eaten daily, foods with "praise" or "scold" values and foods considered to be found in a "good" or a "poor" meal. The foods listed in the good meal were remarkably similar to those listed as

praise foods and the foods listed in the poor meal were basically the scold foods, indicating a parentally influenced learned response toward food. However, in a later replication of this study from a population of 5700 subjects ranging from fourth grade through junior college (Litman, Cooney, and Stief, 1964), opposite results were found. Here similarity between foods comprising the poor meal and praise foods was found. Still, also, Escalona (1945) observed similar juice preferences between babies under four months and their individual caretakers. While serving as nursery psychologist in a prison nursery over a period of two years, Escalona gathered data on the eating behavior of young children ranging in ages from 10 days to 24 months. Many of the babies under four months showed a consistent dislike for either orange juice or tomato juice. Both juices were served equally frequently and the number of children preferring each kind of juice was about equal. These preferences changed occasionally and a checkup revealed that when a change in preference occurred, the baby had been assigned from one person to another. Further checking revealed that the student in charge of a baby showing a decided preference had the same preference.

Although the majority of studies concerning the similarity of food preferences between children and their parents have not attempted to relate parent attitude variables; there are studies available which suggest that parent attitudes may be related to food preferences in

general. Baldwin (1944) in attempting to describe the relationship between children's eating habits, home background, and social adjustment found that abundance of affection and attention seemed to be the major parental attribute leading to a wide acceptance of food. Parental coerciveness and restriction were positively related to appetite and table behavior, but not to the non-finical attribute. The subjects in this study included 76 mothers and their children. Data were obtained from maternal interviews, and observations of children in a nursery school setting. Hellersberg (1946) also found non-finicalness as measured by the food preferences of adolescents to be related to parent behavior. Consistently positive food patterns as measured by a Food Preference Inventory did not seem to relate to any one type of parental disciplinary pattern (i. e. , lenient, strict, or intermediary), but did seem to have the family pattern of adaptability in common. The mother's responses to questionnaires together with family attitudes revealed by the adolescents on a similar questionnaire were analyzed to formulate the family pattern. The mothers of non-finical adolescents tended to not take food training too seriously, and "confessed" their willingness to learn by experiences, especially from their children. Furthermore, the food patterns of the adolescents showed a striking similarity with those of their mothers.

Another way of looking at parental attitudes in relation to the establishment of food preferences has been through the study of family

relationships. Hinton et al. (1963) found that adolescent girls who scored best in family relationships as measured by the Minnesota Counseling Inventory missed fewer meals, had better diets, and indicated an acquaintance with a greater variety of foods than those who scored less well on this scale. Several investigators (Wallen, 1945, 1948; Altus, 1949; Smith, Powell, and Ross, 1955) have indicated that the neurosis-producing factors in family life during childhood are associated with the rejection of commonly liked foods. The strikingly positive relationship between food aversions and neurotic tendencies found by these investigators supports this contention. In addition, Wallen (1943) and Smith et al. (1955) found that female subjects had significantly more food aversions than did male subjects.

Food preferences of young children have been the subject of many investigations. The studies discussed in this section of the review of literature suggest that parent attitudes do affect the food preferences of young children. It is also apparent that some children model their parents' food preferences. Very few studies, however, have investigated the possible relationship between parent attitudes and parent-child similarities in food preferences. Therefore, further investigation in this area is indicated.

A Theoretical Framework

No theoretical framework is present relating parent attitudes to similarity of food preferences among children and their parents. However, a variety of theories of identification are available that suggest such a relationship may exist. Theories of personality place importance upon identification as the mechanism by which a child imitates, models, or introjects the behavior of his parents and thereby incorporates these traits into his own personality. Although there is agreement in the defining characteristics of identification, the various theories diverge in their emphasis upon the antecedent conditions leading to identification. Three variables related to identification will be discussed: parental nurturance, parental punitiveness, and parental power.

Several learning theorists (Mower, 1950; Sears, 1957) regard a nurturant interaction between a caretaking adult and a child as a necessary precondition of identification. Through a warm, rewarding interaction, the child acquires a dependency drive. Since the mother cannot always be present and at times withholds attention and affection as a disciplinary measure, the child learns to reproduce her attributes for secondary reward value. This type of identification is often referred to as "anaclitic identification" and has received considerable support in the literature (Bandura and Walters, 1963; Sears,

Maccoby and Lewin, 1957; Whiting and Child, 1953). In a study of the modeling behavior of 40 nursery school children, Bandura and Huston (1961) found that the children who experienced a warm, rewarding interaction with the model reproduced responses resembling those of the model to a significantly greater degree than did those children who experienced a relatively cold and distant relationship. The children performed a diverting two-choice discrimination problem with a model who displayed fairly explicit, although functionless behaviors during the trials. The number of the model's behaviors reproduced by the subject was recorded. Half of the subjects experienced a warm, rewarding interaction with the model prior to the imitative learning while the remaining subjects experienced a cold, non-nurturant relationship. Also supporting the nurturance hypothesis and of particular relevance to the study of food preference modeling behavior is a study by Duncker (1938), who found that imitation of food choices was favored if the subject were emotionally attached to the model. In the testing situation, nursery school children were asked to choose, in order, the food items out of six that they liked best. In the control group, the child was alone with the experimenter while in the experimental group, the child observed the choices of another child before being allowed to choose. The identical choices were markedly higher in the experimental group than in the control group and further experiments indicated that imitation is favored under factors of model

attachment, prestige, and age. Marinho (1942) found similar results in a food preference modeling experiment with preschool children. The models were other children who had been observed to exert influence upon their companions. The models most frequently imitated were categorized as affectionate or amusing. Those models whose ascendancy was based on force or impertinent teasing failed in producing significant imitations by the children.

A second form of identification has been explained in terms of parental punitiveness. Traditional psychoanalytic theory places emphasis upon "identification with the aggressor" as the primary antecedent leading to identification (Bandura and Walters, 1963). In this type of identification, the child adopts the characteristics of a punitive and aggressive parent as a means of reducing anxiety associated with fear of punishment. This form of identification is supported in a study by McDavid's (1959) who found consistent results suggesting that more strict and authoritarian child rearing attitudes are related to more matched-dependent behavior in children. The subjects were 32 children aged three to five years. Matched-dependent behavior in the children was measured by having the child play a two-choice game in alternating trials with an adult. The imitative behavior was related to parent attitudes as measured by the Parental Attitude Research Instrument. Hartup (1962) confirmed these findings in a study of 63

children aged three to five years. Again authoritarian, intrusive, or suppressive attitudes were related to imitation behavior.

A third variable hypothesized to affect identification is power. Proponents of this theory argue that the child identified with a parent not solely because the parent is warm and nurturant or because the parent is punitive, but because the parent is more powerful. Social power has been defined as the ability of a person to influence the behavior of others by controlling their positive and negative reinforcements (Bandura and Walters, 1963). Maccoby (1959) describes the frequency of covert practice of another's responses in terms of power or control of resources. A child thus acquires a repertoire of actions by producing covertly the actions characteristic of adults with whom he interacts most frequently and who control the resources he needs. In a comparative study of the status-envy or consumer power, social power, and secondary reinforcement theories of imitative learning, Bandura, Ross, and Ross (1963a) found that models who were attributed rewarding power elicited approximately twice as many matching responses than models who were perceived by the children as possessing no control over rewarding resources.

Although these three variables of parental nurturance, parental punitiveness, and parental power are well grounded in theories of identification, the importance of the sex of the parent and the sex of the child has received relatively little attention. However, recently,

Lynn (1962) has presented a framework regarding the influence of sex differences on parental identification. Lynn postulated that both male and female infants learn to identify with the mother. Boys, but not girls, must shift from this initial identification with the mother to a cultural role identification. Since the father is not readily available in the home, the boy does not have a direct model. Therefore, through rewards and punishments from his mother and female teachers, the boy learns a culturally stereotyped identification. The girl on the other hand learns to identify within the context of an intimate personal relationship with the mother. Consequently, Lynn hypothesized that the girl learns specific mother identification while the boy learns a cultural role identification.

In contradiction to Lynn's (1962) position, another hypothesis emphasizing the important influence of the father on the identification process has been suggested by Johnson (1963). She cites evidence that the father differentiates his role toward opposite sexed children whereas the mother does not and is, therefore, an important figure in role identification for both males and females. After the first identification of both male and female children with the mother in the love-dependency relationship, the identification of both male and female children with the father emerges in differentiated role relationships. The father rewards the female's expressive behavior while demanding more instrumental behavior from the male. According to this theory,

expressiveness is characterized by an orientation toward "pleasing," while the instrumental role behavior is characterized by a more disciplined pursuit of goals.

Thus, in exploring the variables relating to parent-child food preference similarities within a theoretical framework of identification, the sex of parent and sex of child assume considerable importance. The present study, therefore, attempts to explore the relationship between parent-child similarities in food preferences and parent attitudes with respect to the variables of sex of parent and sex of child.

METHODS

Subjects

The subjects of the present study were 35 children selected from a sample of 40 preschool children attending two preschool programs sponsored by the Family Life Department at Oregon State University and their parents. Variables considered in selecting the children for this study included:

1. that the children will range in age from 3 years-4 months to 4 years-2 months at the time of data collection,
2. that the children will have I. Q. scores of "average" or above as measured by the Peabody Picture Vocabulary Test (Dunn, 1965),
3. that the children will come from families of the upper and middle socio-economic class as determined by Hollingshead's (1957) Two Factor Index of Social Position,
4. that the children will come from families where both parents are present,
5. that the children will be of the Caucasian race,
6. that the children will have no physical defects which might affect their performance in carrying out the tasks required of them in the present study.

Pertinent information regarding the children's age and sex; and the families' socio-economic status was obtained from a questionnaire filled out by parents upon acceptance of enrollment of their children into the two preschool programs. I. Q. scores of the children were obtained by administering to all children Form A of the Peabody Picture Vocabulary Test (Dunn, 1965). To determine the socioeconomic status of the families from which the children came, Hollingshead's (1957) "Two Factor Index of Social Position" was used.

Description of the Children

A description of the sample of children used in this study according to sex, age, and I. Q. is summarized in Table 1.

Table 1. Description of Children by Sex, Age, and I. Q.

Subjects	N	Mean Age (Years/Months)	Mean I. Q.
Boys	21	3/10	108
Girls	14	3/8	110
Total	35	3/9	109

Age and Sex

The sample of 35 children included 21 boys and 14 girls all ranging in ages from 3 years-4 months to 4 years-2 months. The

mean ages for the boys and girls were 3 years-10 months and 3 years-8 months respectively.

I. Q.

The Peabody Picture Vocabulary Test (Dunn, 1965) was used to obtain I. Q. scores on all children. This instrument provides an estimate of preschool aged children's verbal intelligence through measuring their receptive vocabularies. All children had I. Q. scores ranging from 90 to 129 with a mean I. Q. score of 109. The mean I. Q. scores for the boys and girls were 108 and 110 respectively.

Socioeconomic Status

Hollingshead's "Two Factor Index of Social Position" was used to determine the socioeconomic status of the families in the present study. In developing this index, Hollingshead (1957) assumed (1) that there is a class structure in our society; (2) that positions in this society can be determined by a few specific characteristics; (3) that these characteristics may be represented numerically for means of statistical analysis. The two factors used by Hollingshead (1957) were occupation and education. Levels of occupation and education were given a scaled score ranging from one to seven, and were multiplied by factor weights of seven and four for occupation and education, respectively. The two products were then added and yielded a

socioeconomic status score, ranging from a low of 11 to a high of 77. Socioeconomic status may be grouped into five classes (Hollingshead, 1957, p. 10).

Socioeconomic Status	Range of Computed Scores
I (Upper)	11-17
II	18-27
III	28-43
IV	44-60
V (Lower)	61-77

According to Hollingshead's (1957) index, the families in the present study were distributed among the socioeconomic status positions as summarized in Table 2.

Table 2. Description of Families by Socioeconomic Status

Socioeconomic Status	N
I (Upper)	21
II	11
III	2
IV	1
V (Lower)	<u>0</u>
Total	35

Instruments

Two instruments were used to collect the data for the present study. These included: A Picture Food Preference Inventory,

designed for this study, and the Parental Attitude Research Instrument.

Picture Food Preference Inventory (PFPI)

On the basis of the checklist techniques reported in the literature for determining children's food preferences (Bryan and Lowenberg, 1958; Davids and Lawton, 1961; Leverton and Coggs, 1961), a Picture Food Preference Inventory was devised for use in this study.

The Picture Food Preference Inventory (PFPI) consists of forty-five full color, life-size, photographic reproductions of actual foods selected from a group of 171 food models published by the National Dairy Council (1955). The food items that make up the list were selected in accordance with the following criteria:

1. the composite list is a nutritionally sound representation which includes dairy products, vegetables, fruits, meats, meat substitutes, breads, and cereals;
2. each food item is a single food and is not pictured with another;
3. each food item represents a commonly used food in the defined culture and particular locale and is familiar to preschool children.

A list of food items included in the PFPI is found in Appendix A. These food items have been randomly ordered and are presented to the subjects in this order, one at a time. In the test situation, the subject is told the name of the food item and is asked whether he likes it. A positive response to an item is taken as an indication of a positive preference, while a negative response is taken as an indication of a negative preference.

Reliability

The reliability of a test reflects the degree to which repeated applications of a test to the same subjects under similar conditions could be depended upon to yield similar results. The test-retest method, using one half of the sample of this study provided relatively high measures of reliability for the PFPI. The time interval between pre- and post-testing varied from two to three weeks. This interval was chosen because it appeared long enough to prevent the memory of previous responses and yet short enough to avoid any effects of maturation.

The first measure of reliability included an analysis of the pre- and post-test preferences of subjects for each food item found in the PFPI. The data revealed that the range of percent of agreement between pre- and post-test preferences for all subjects on each food item was 65 to 100, with a mean percent of agreement of 87.7 (See Appendix A).

The Pearson Product-Moment Correlation Method was used to determine a second measure of reliability. The reliability coefficient obtained was .77.

Validity

Since no criterion measures were present to obtain a validity coefficient for the PFPI, a pilot study was conducted in an attempt to obtain some index of validity for the PFPI. The subjects of this study were twenty children ranging in ages from 3 years-10 months to 5 years, attending one of three preschool programs sponsored by the Family Life Department at Oregon State University.

The purposes of this pilot study were 1) to establish whether the pictures of foods found in the PFPI were familiar to preschool children in this locale and 2) to make changes in items or procedures in testing if indications became apparent.

The forty-five food models were randomly ordered and then placed in series of four on strips of poster board. Each strip represented a group of four foods, from which the child could select the particular item requested of him for identification. The procedure required that the child identify a picture of a food when it was asked of him. In order to prevent the possibility of allowing the child to correctly identify the picture of a food asked for through the process of elimination, the identification of only three of the four picture food

items on each strip was required. Duplicate pictures of those food items not required for identification in each strip were then incorporated at the end of the test to allow for the identification of all forty-five items. Randomization procedures were again utilized to determine the order of the three items to be identified on each strip.

During the testing procedure, the stacked strips of pictures were propped up on a low table in front of the child, the first four pictures exposed to view. The child was asked: "Which one is the (name of food)?" Each response was recorded on a tally sheet as a (+) for correct and a (0) for incorrect. After the three responses were elicited for a strip of four items, the strip was turned face down exposing the next strip until all items were completed.

The results of the pilot study indicated that this sample of pre-school children showed sufficient familiarity with the pictures of food items found in the PFPI to warrant their inclusion in the instrument (see Table 3). All pictures of food items were correctly identified by at least one-half of the subjects. Most food items were correctly identified by three-fourths of the subjects.

Despite the fact that the pictures of food items in the PFPI were correctly identified by a majority of the subjects in this study, a number of important difficulties or problems were encountered. Further analysis of data indicated that the children who were least able to identify the pictures of food items in the PFPI came from minority

Table 3. Results of Pilot Study: Identification of Food Items in the PFPI.

Food Item	Correct Identification	Incorrect Identification
A. Milk and Milk Products		
1. Milk	20	0
2. Ice cream	20	0
3. Swiss Cheese	19	1
4. American Cheese	18	2
5. Cottage Cheese	18	2
B. Meat and Meat Substitutes		
1. Chicken	20	0
2. Ham	20	0
3. Egg	20	0
4. Meat	19	1
5. Baked Beans	19	1
6. Bacon	18	2
7. Meat patties	18	2
8. Liver	12	8
9. Pork chop	10	10
C. Breads and Cereals		
1. Macaroni	20	0
2. Rolls	20	0
3. White bread	19	1
4. Shredded Wheat	17	3
5. Corn Flakes	16	4
6. Muffin	16	4
7. Whole Wheat Bread	15	5
8. Toast	14	6
9. Oatmeal	10	10
D. Fruits and Vegetables		
1. Carrot sticks	20	0
2. Tomato juice	20	0
3. Pear	20	0
4. Orange	20	0
5. Banana	20	0
6. Tomato	20	0
7. Orange juice	19	1
8. Spinach	19	1
9. Strawberries	19	1

Table 3. Continued.

Food Item	Correct Identification	Incorrect Identification
10. Grapefruit	18	2
11. Peas	18	2
12. Lettuce	18	2
13. Baked Potato	18	2
14. Broccoli	18	2
15. Apple	18	2
16. Beets	17	3
17. Boiled Potato	17	3
18. Cooked carrots	17	3
19. Onions	17	3
20. Apricots	15	5
21. Prunes	14	6
22. Green beans	14	6

cultures, indicating the need to limit the sample of the final study to Caucasian children only. Also while administering the PFPI to subjects in the pilot study the researcher noticed that although the items were randomly ordered for presentation, several similar items were placed next to each other. These appeared to pose some discrimination problems for the subjects. For example, the pork chop and the liver were placed side by side and were often mistaken for one another. The same confusion occurred with the hot cooked cereal and the cold dry cereal. It would appear, therefore, that if these items had not been placed so close together the subjects' true familiarity with these food items may have been significantly higher. Furthermore, because subjects encountered difficulties in distinguishing between the hot cooked cereal and the cold dry cereal, changes in

presentation procedures were made. These cereal items were specifically changed to shredded wheat, corn flakes, and oatmeal in order to enhance communication and thus eliminate the discrimination problem.

Another index of validity was attempted through consultation with a nutrition specialist. Both the adequacy of the nutritional representation of the instrument and the adequacy of food item familiarity among the children tested were confirmed. The representation of foods in each food group was found to be sufficient from a nutritional standpoint and the percentage of children familiar with each food item was deemed high enough to warrant inclusion of all items in the inventory.

Parental Attitude Research Instrument (PARI)

The Parental Attitude Research Instrument (PARI) is a measurement device developed by Schaefer and Bell (1958), to measure attitudes of how mothers feel about family life and child rearing. In the present study, a modified version of the PARI developed by Emmerich (1969) was used. Emmerich developed his modified version of the PARI on the basis of further works with the PARI done by Zuckerman et al. (1958) in a study of mothers' attitudes toward child rearing and by Nichols (1962) in a study of fathers' attitudes toward child rearing.

Emmerich's modified version of the PARI used in this study (See Appendix B) consists of a large number of generalized third-person statements about child-rearing to which subjects are asked to respond to in terms of one of four categories.

A = Strongly agree

a = Mildly agree

d = Mildly disagree

D = Strongly disagree

Different forms of the test are available for use with mothers and fathers. These forms of the test differ slightly, but are very similar with respect to their scale contents and factorial structure. The three factors and their corresponding scales for the Mother's Form are as follows:

- 1) Authoritarian-Control Factor
 - a) Fostering dependency
 - b) Seclusiveness of the mother
 - c) Excluding outside influences
 - d) Suppression of aggression
 - e) Suppression of sexuality
- 2) Hostility-Rejection Factor
 - a) Marital conflict
 - b) Rejection of the homemaking role
 - c) Irritability
- 3) Democratic Factor
 - a) Encouraging verbalization
 - b) Equalitarianism
 - c) Comradeship and sharing

In the Father's Form the scale of Seclusiveness of the mother has been changed to Devotion to the father role, the scale of Rejection of the homemaking role has been changed to Rejection of family life, and the scale of Irritability has been changed to Rejection of interaction with the child.

To control for the acquiescence-response sets in the PARI, all odd numbered statements are stated so that agreement signifies the presence of that attribute, while for all even numbered statements, the reverse is true. For odd numbered statements strong endorsement of such statements is given a score of +2, mild endorsement +1, mild disagreement -1 and strong disagreement -2. For even numbered statements the signs are reversed.

Reliability

Using a sample of 100 unmarried student nurses, internal consistency reliability coefficients were computed with the Kuder-Richardson Formula 20 for 24 PARI scales developed by Schaefer and Bell (1957). The relatively low reliabilities found were believed to be due to the homogeneity of the sample, but the authors considered them adequate for an investigation of the factorial structure of the instrument. When a set of 23 five-item scales were tested on samples of primipara and multipara, all but one of the internal consistency reliability coefficients calculated exceeded .50.

Validity

Evidence of construct validity for the PARI has been obtained by Zuckerman and Oltean (1959) in a study of the relationship between parental attitudes and a variety of personality variables. In this study the PARI factors were correlated with the scales from the Edwards Personal Preference Schedule (EPPS), the Minnesota Multiphasic Personality Inventory (MMPI), the F Scale of Authoritarianism, and a Test of Self Acceptance. The three samples used in this study were 60 female psychiatric patients, 24 mothers of college students, and 88 unmarried student nurses. The Authoritarian-Control Factor in the PARI was found to be significantly and positively related to the F Scale of Authoritarianism for the patients group ($r = .51$) and for the nurses group ($r = .61$). The Hostility-Rejection Factor in the PARI was positively related to the achievement and aggression and negatively related to the nurturance scales found in the EPPS for the mothers group. For the nurses group, scores on the Self Acceptance Test were found to be negatively ($r = .37$) related to the Hostility-Rejection Factor in the PARI. Furthermore, for the patients group, the Hostility-Rejection Factor in the PARI showed a significant positive correlation with the variables in the psychotic triad (pa, pt, sc) found in the MMPI.

In another study (Freedheim and Reichenberg-Hackett, 1959), the PARI scales proved sensitive to differences between two groups, varying in training and background, and differing in overt behavior towards children. The PARI was given to four groups of subjects: Group A included 16 highly trained professional persons on the rehabilitation staff of a children's cerebral palsy hospital; Group B comprised 16 nurses' aides at the same hospital; Group C included 48 college students taking a course in preschool child adjustment, and Group D consisted of 47 college students from a history class who served as a control group. Pre- and post-test scores of subjects taken before and after an interval of four months indicated that nine of the PARI scales differentiated significantly between the nurses' aides and staff groups. Differences in behavior and orientation toward children were also reflected in the scores. When the student group pre- and post-test scores were compared, nine PARI scales showed significant shifts, reflecting an increased understanding of child development after a course in preschool child adjustment.

Zunich (1966) investigated the relationship between parental attitudes and the actual behavior of children. Although the child-behavior categories were not specifically designed to assess dimensions of the PARI, many of the observed child-behavior categories were hypothesized to reflect qualities of relationships which the PARI was designed to measure. Of the 288 comparisons made between PARI

scales and child behavior categories, nine were significant at or beyond the .05 level of confidence.

The findings of Emmerich (1969) are also of particular importance to the present study since his version of the PARI was used as a measurement device to study the parental attitudes of subjects in this study. In Emmerich's study mothers and fathers living in a university community were administered the PARI and the Parental Role Questionnaire (PRQ). The PRQ was designed by Emmerich to measure parental role effectiveness on several different dimensions. The purpose of this study was to clarify the meanings of certain dimensions of parental role effectiveness found in the PRQ. Of the 54 correlation coefficients computed to study the relationship between the PRQ dimensions and the three PARI Factors, 21 were statistically significant ($p < .05$), and several more approached significance. Most striking was the tendency for high scores on the Authoritarian-Control Factor in the PARI to be associated with low scores on a variety of PRQ dimensions measuring parental competence.

Procedure

Establishment of Rapport

The parents of all children enrolled in the preschool programs sponsored by the Family Life Department at Oregon State University

agreed in advance to cooperate in research projects conducted through the department, therefore, obtaining cooperation from parents presented no major problems.

In order to facilitate administration of the Picture Food Preference Inventory to the children and increase the reliability of the results, one hour per day for one week was spent in establishing rapport with the children. When the testing began, the children were not approached in any order, but were asked to participate when they were not intensely involved in an activity.

When approaching a child for participation in the present study, the researcher said:

(Child's name), I brought some pictures of foods to school today.

Would you like to look at them with me?

A few children refused to participate when first asked. To these children the researcher said:

You don't want your turn now. Maybe later.

Only children who were willing to participate were used as subjects in the present study.

Administration of the PFPI to Children

A small room adjacent to the main classroom of the nursery school was used for testing. A low table and two child-sized chairs were placed in the room and distracting items were removed or

shielded from view. Only one subject and the researcher were present in the room during the testing period. The child was seated at the table facing the prop which held the pictures, and the interviewer was seated to the child's right holding a tally sheet on which to record the child's responses. The pictures were taken from a stack behind the prop and presented one at a time. The list of foods in the order of presentation may be found in Appendix A. As each picture was presented, the interviewer said:

This is (name of food) .

Do you like it?

The response was recorded as being either positive (+) or negative (0). When responses were ambiguous, the interviewer asked the following sequence of questions in an attempt to facilitate communication:

Do you like to eat (name of food) ?

Have you ever eaten (name of food) ?

Do you think it would be good to eat?

The interview was taped so that difficult judgements could be reviewed by qualified persons in child development. The interview time per child was approximately 7 minutes.

Administration of the PFPI to Parents

Four evenings were set aside for parent testing in a college classroom in the Home Economics Building at Oregon State University. Parents were requested to come together for testing. During testing all parents were seated at tables and chairs positioned toward a movie screen. The 45 food models were projected individually onto the screen by an opaque projector in the same order as presented to the children. Parents were asked to respond to each of the items presented on the screen according to one of the five categories listed below:

1. Like very much
2. Like
3. Neither like nor dislike
4. Dislike
5. Dislike very much

Instructions for administering the PFPI to parents along with a sample test are found in Appendix C. Parents were asked to respond to the food item only as shown on the screen. The categories like very much and like represented a positive preference score while the categories dislike very much and dislike represented a negative preference score. The response of neither like nor dislike was considered neutral. The frequency of like, dislike, and neutral responses

for fathers and mothers are found in Appendix D. From these data, a food preference similarity score for each child and his mother and for each child and his father were computed. Since no neutral category was represented in the children's responses, this category was eliminated from the parents' responses for scoring purposes. At the suggestion of the statistician, similarity scores were thus computed as a percentage of like similarity and dislike similarity on the basis of the total possible chances for the parents and children to have identical preferences. These percentages of similarity were used in the final analysis.

A second response was asked of the parents for each food item presented. They were asked to indicate in the blank space provided on the answer sheet those methods of preparation or combination with other foods which would either increase or decrease their indicated preference for the food. In recognition of the fact that there are many ways that a single food item may be incorporated into a diet and still be nutritionally satisfactory, these alternatives provided possibilities for further exploration.

Furthermore, since health reasons, religious reasons, or unfamiliarity with the food item may affect the response, a place was provided for each item to indicate if these possibilities apply.

Approximate testing time was 35 minutes.

Administration of the PARI to Parents

The PARI was administered to parents on one of four evenings along with the Picture Food Preference Inventory. The completion of the questionnaire took approximately 20 minutes. The parents were instructed to answer questions in such a manner as to reflect their own viewpoint toward their child. In order to avoid contamination of the data, parents were asked not to discuss their testing experience with other parents until all parents were tested. The relationship between the food preference similarity scores and the scores on the PARI with respect to sex of child and sex of parent served as a basis for the analysis.

RESULTS

The purpose of the present study was to explore the relationships between the similarity of food preferences among parents and children, and parent attitudes. Thirty-five preschool aged children, 21 boys and 14 girls, and their parents served as subjects for this study. However, because of the absence of fathers of two boys during parent testing, they were not included in the sample. In all analyses involving fathers and boys, therefore, the sample was 19 rather than 21. All children were enrolled in one of two preschool programs established by the Family Life Department at Oregon State University. Variables considered in the selection of subjects for this study included the children's age, sex, IQ, and socioeconomic status of the family.

In an attempt to obtain a measure of food preference similarity among parents and children, a Picture Food Preference Inventory was designed for this study and administered to all children and their parents. The food preference similarity scores among children and their parents were computed by tabulating the frequency of similar choices of food items found in the PFPI. The distribution of frequencies was then converted into percentages and was correlated with the attitude scores of parents. A modified version of the Parental Attitude Research Instrument (Emmerich, 1969) was used to measure

various dimensions of parent attitudes. Analysis of data included a study of the relationship between the parent-child food preference similarity and parent attitudes with respect to the variables of sex of child and sex of parent.

Tests of Hypotheses

Four null hypotheses were generated for this study. The Pearson Product-Moment Correlation Method was used to test all hypotheses. This statistic allows for a measure of relationship between two variables, the measure being independent of the standard deviations of the two groups of scores (Glass and Stanley, 1970). The .10 level of significance was chosen as the criterion for statistical significance.

The results of the tests of hypotheses are presented individually. In addition, descriptive analyses were employed to explore the food preference similarity and dissimilarity of parents and children according to the basic food groups found in the PFPI.

Hypothesis I

Hypothesis I: There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their fathers.

A summary of the findings concerning the relationships between boy-father food preference similarity and fathers' and mothers'

attitudes is presented in Table 4. These findings reveal that food preference similarity among boys and fathers is significantly and positively related to mothers' attitudes on the democratic factor dimension ($r = .40$, $p < .10$) and two democratic subscales, encouraging verbalization ($r = .46$, $p < .05$) and equalitarianism ($r = .39$, $p < .10$). Also significant is the negative relationship between boy-father food preference similarity and mothers' attitudes on one authoritarian-control subscale, excluding outside influences ($r = -.42$, $p < .10$). Therefore, the null hypothesis may be rejected only for these relationships, and it should be noted that each instance of significance was associated with mothers' attitudes.

Hypothesis II

Hypothesis II: There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their mothers.

A summary of the findings concerning the relationships between boy-mother food preference similarity and fathers' and mothers' attitudes is presented in Table 5. These findings reveal that food preference similarity among boys and mothers is significantly and positively related to mothers' attitudes on the democratic factor dimension ($r = .42$, $p < .10$) and one democratic subscale, encouraging verbalization ($r = .55$, $p < .01$). Therefore, the null hypothesis may be

Table 4. A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Boy-Father Food Preference Similarity and Fathers' and Mothers' Attitudes.

Fathers' Attitudes	Boy-Father Similarity n=19	Mothers' Attitudes	Boy-Father Similarity n=19
Authoritarian-Control Factor	-.13	Authoritarian-Control Factor	-.34
Fostering dependency	.23	Fostering dependency	-.10
Devotion to father role	-.31	Seclusiveness of the mother	-.31
Excluding outside influences	-.04	Excluding outside influences	-.42*
Suppression of aggression	.09	Suppression of aggression	-.11
Suppression of sexuality	-.36	Suppression of sexuality	-.11
Hostility-Rejection Factor	-.06	Hostility-Rejection Factor	-.24
Marital conflict	.00	Marital conflict	-.30
Rejection of family life	.03	Rejection of homemaking role	-.16
Rejection of interaction with child	-.17	Irritability	-.04
Democratic Factor	.06	Democratic Factor	.40*
Encouraging verbalization	.23	Encouraging verbalization	.46**
Equalitarianism	-.16	Equalitarianism	.39*
Comradeship and sharing	.19	Comradeship and sharing	.12

* $r = .39$ $p < .10$

** $r = .46$ $p < .05$

*** $r = .58$ $p < .01$

Table 5. A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Boy-Mother Food Preferences Similarity and Fathers' and Mothers' Attitudes.

Fathers' Attitudes	Boy-Mother Similarity n=19	Mothers' Attitudes	Boy-Mother Similarity n=21
Authoritarian-Control Factor	-.06	Authoritarian-Control Factor	-.16
Fostering dependency	.29	Fostering dependency	.04
Devotion to father role	-.26	Seclusiveness of the mother	-.23
Excluding outside influences	-.01	Excluding outside influences	-.24
Suppression of aggression	.15	Suppression of aggression	-.15
Suppression of sexuality	-.36	Suppression of sexuality	.11
Hostility-Rejection Factor	-.04	Hostility-Rejection Factor	-.11
Marital conflict	-.12	Marital conflict	-.29
Rejection of family life	.10	Rejection of homemaking role	-.16
Rejection of interaction with child	-.05	Irritability	.18
Democratic Factor	.03	Democratic Factor	.42*
Encouraging verbalization	.17	Encouraging verbalization	.55***
Equalitarianism	-.21	Equalitarianism	.29
Comradeship and sharing	.26	Comradeship and sharing	.18

* $r = .39$ $p < .10$

** $r = .46$ $p < .05$

*** $r = .58$ $p < .01$

* $r = .37$ $p < .10$

** $r = .43$ $p < .05$

*** $r = .55$ $p < .01$

rejected only for these relationships, and it should be noted that each instance of significance was associated with mother's attitudes.

Hypothesis III

Hypothesis III: There will be no significant relationships between parent attitudes and similarity of food preferences among girls and their fathers.

A summary of the findings concerning the relationships between girl-father food preference similarity and fathers' and mothers' attitudes is presented in Table 6. These findings reveal that food preference similarity among girls and fathers is significantly and positively related to fathers' attitudes on one authoritarian-control subscale, suppression of sexuality ($r = .48, p < .10$). Also significant is the negative relationship between girl-father food preference similarity and fathers' attitudes on one democratic subscale, comradeship and sharing ($r = -.59, p < .05$). Therefore, the null hypothesis may be rejected only for these relationships. However, it should be noted that while not significant, three other authoritarian-control subscales on fathers' attitudes were negatively related to girl-father food preference similarity of which one, excluding outside influences, approached significance ($r = -.45$). Another significant finding is the positive relationship between girl-father food preference similarity and mothers' attitudes on one authoritarian-control subscale, seclusiveness

Table 6. A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Girl-Father Food Preference Similarity and Fathers' and Mothers' Attitudes.

Fathers' Attitudes	Girl-Father Similarity n=14	Mothers' Attitudes	Girl-Father Similarity n=14
Authoritarian-Control Factor	-.12	Authoritarian-Control Factor	.39
Fostering dependency	-.38	Fostering dependency	.22
Devotion to father role	-.25	Seclusiveness of the mother	.49*
Excluding outside influences	-.45 ^(t)	Excluding outside influences	-.13
Suppression of aggression	.39	Suppression of aggression	.18
Suppression of sexuality	.48*	Suppression of sexuality	.11
Hostility-Rejection Factor	.24	Hostility-Rejection Factor	-.03
Marital conflict	.09	Marital conflict	.09
Rejection of family life	.21	Rejection of homemaking role	-.21
Rejection of interaction with child	.34	Irritability	-.01
Democratic Factor	-.37	Democratic Factor	.31
Encouraging verbalization	.04	Encouraging verbalization	-.01
Equalitarianism	-.32	Equalitarianism	.37
Comradeship and sharing	-.59**	Comradeship and sharing	.37

- ^(t) = trend
 * r = .46 p < .10
 ** r = .53 p < .05
 *** r = .66 p < .01

of the mother ($r = .49$, $p < .10$). Therefore, the null hypothesis regarding this relationship may be rejected. However, it should be indicated that, while this relationship is significant, more significant relationships and tendencies were found between girl-father food preference similarity and fathers' attitudes.

Hypothesis IV

Hypothesis IV: There will be no significant relationships between parent attitudes and similarity of food preferences among girls and their mothers.

A summary of the findings concerning the relationships between girl-mother similarity of food preferences and fathers' and mothers' attitudes is presented in Table 7. These findings reveal that food preference similarity among girls and mothers is significantly and positively related to fathers' attitudes on one authoritarian-control subscale, suppression of aggression ($r = .49$, $p < .10$). Also significant is the negative relationship between girl-mother food preference similarity and fathers' attitudes on one democratic subscale, comradeship and sharing ($r = -.47$, $p < .10$). Therefore, the null hypothesis may be rejected only for these relationships, and each instance of significance was associated with fathers' attitudes. Furthermore, it should be noted, that while not significant, the relationship between girl-mother food preference similarity and fathers' attitudes on one

Table 7. A Summary of the Correlation Coefficients Obtained Regarding the Relationships Between Girl-Mother Food Preference Similarity and Fathers' and Mothers' Attitudes.

Fathers' Attitudes	Girl-Mother Similarity n=14	Mothers' Attitudes	Girl-Mother Similarity n=14
Authoritarian-Control Factor	.15	Authoritarian-Control Factor	.34
Fostering dependency	.02	Fostering dependency	.04
Devotion to father role	-.27	Seclusiveness of the mother	.41
Excluding outside influences	-.17	Excluding outside influences	-.03
Suppression of aggression	.49*	Suppression of aggression	.08
Suppression of sexuality	.44 ^(t)	Suppression of sexuality	.27
Hostility-Rejection Factor	-.10	Hostility-Rejection Factor	-.22
Marital conflict	-.24	Marital conflict	-.05
Rejection of family life	-.04	Rejection of homemaking role	-.41
Rejection of interaction with child	.01	Irritability	-.06
Democratic Factor	-.14	Democratic Factor	.15
Encouraging verbalization	.10	Encouraging verbalization	-.02
Equilitarianism	.03	Equalitarianism	.21
Comradeship and sharing	-.47*	Comradeship and sharing	.15

- ^(t) = trend
 * r = .46 p < .10
 ** r = .53 p < .05
 *** r = .66 p < .01

authoritarian-control subscale, suppression of sexuality, approached significance ($r = .44$).

Additional Findings

In order to obtain a more detailed picture of food preference similarity between children and parents, descriptive analyses were employed to provide information concerning the food preference similarity and dissimilarity of subjects for each child-parent grouping according to the basic food groups (i. e., all foods, meats and meat substitutes, breads and cereals, dairy foods, fruits, and vegetables). To do this, the average percentage similarity of likes, similarity of dislikes, and dissimilarity were computed on the basis of the total possible chances for parents and children to have identical preferences.

A summary of the average percentage similarity of likes, similarity of dislikes, and dissimilarity for each child-parent grouping according to the basic food groups is presented in Table 8. Readily apparent is the finding that the percentage similarity of likes predominates in all child-parent groupings over all food groups. Also revealed is the finding that similarity of dislikes occupies a very small proportion in comparison to similarity of likes and dissimilarity.

An analysis of the data regarding specific food groups reveal that generally the fruit food group contains the highest percentage

Table 8. Average Percentage Similarity of Likes, Similarity of Dislikes, and Dissimilarity for Parent-Child Groupings According to Basic Food Groups.

Child-Parent Grouping	All Foods	Meat	Breads and Cereals	Dairy	Fruits	Vegetables
All Groups						
Similarity-Likes	75.0	76.3	73.7	78.6	84.4	66.2
Similarity-Dislikes	3.3	2.4	4.9	2.1	2.1	4.3
Dissimilarity	21.7	21.3	21.4	19.3	13.5	29.5
Boy-Father						
Similarity-Likes	78.5	80.2	81.4	83.3	83.8	68.4
Similarity-Dislikes	3.2	0.6	4.6	1.3	4.7	4.4
Dissimilarity	18.3	19.2	14.0	15.4	11.5	27.2
Boy-Mother						
Similarity-Likes	77.1	78.2	78.8	85.2	85.9	65.5
Similarity-Dislikes	2.3	3.1	4.3	1.0	1.6	1.4
Dissimilarity	20.6	18.7	16.9	13.8	12.5	33.1

Table 8. Continued.

Child-Parent Grouping	All Foods	Meat	Bread and Cereals	Dairy	Fruits	Vegetables
Girl-Father						
Similarity-Likes	72.5	77.1	69.3	72.9	84.4	62.6
Similarity-Dislikes	3.6	3.4	4.1	1.8	0.9	5.9
Dissimilarity	23.9	19.5	26.6	25.3	14.7	31.5
Girl-Mother						
Similarity-Likes	71.9	69.8	65.5	73.1	83.3	68.1
Similarity-Dislikes	4.2	2.6	6.6	4.2	1.4	5.6
Dissimilarity	23.9	27.6	27.9	22.7	15.3	26.3

similarity of likes and lowest percentage dissimilarity among children and parents. The vegetable group, on the other hand, generally contains the lowest percentage similarity of likes, with the exception of the girl-mother child-parent grouping in which the breads and cereals food group is lower (65.5%) than the vegetable food group (68.1%). Furthermore, the vegetable food group generally contains the highest percentage dissimilarity, with the exception of the girl-mother child-parent grouping in which the breads and cereals (27.9%) and meat (27.6%) food groups are higher than the vegetable food group (26.3%).

In addition, the food preference similarity and dissimilarity of parents and children were analyzed according to boys and girls as related to both parents combined. A comparison of boy-parent food preference similarity and dissimilarity is presented in Table 9. These findings reveal that when no distinction is made between sex of parent and when all food groups are considered, the boys have a higher percentage similarity of likes with their parents than do girls. Similarly, boys generally have a lower percentage similarity of dislikes with their parents than do girls, with the exception of the fruit food group in which the boy-parent grouping (3.15%) is higher than the girl-parent grouping (1.15%). Furthermore, the boys generally have a lower percentage dissimilarity with their parents than do girls, with the exception of the vegetable food group in which the boy-parent grouping (30.15%) is higher than the girl-parent grouping (28.90%).

Table 9. Comparison of Boy-Parent Food Preference Similarity and Dissimilarity and Girl-Parent Food Preference Similarity and Dissimilarity.

Food Group	Boy-Parent	Girl-Parent
All Foods		
Similarity of Likes	77.80	72.20
Similarity of Dislikes	2.75	3.90
Dissimilarity	19.45	23.90
Meat and Meat Substitutes		
Similarity of Likes	79.20	73.45
Similarity of Dislikes	1.85	3.00
Dissimilarity	18.95	23.55
Breads and Cereals		
Similarity of Likes	80.10	67.40
Similarity of Dislikes	4.45	5.35
Dissimilarity	15.45	27.25
Dairy Foods		
Similarity of Likes	84.25	73.00
Similarity of Dislikes	1.15	3.00
Dissimilarity	14.60	24.00
Fruits		
Similarity of Likes	84.85	83.85
Similarity of Dislikes	3.15	1.15
Dissimilarity	12.00	15.00
Vegetables		
Similarity of Likes	66.95	65.35
Similarity of Dislikes	2.90	5.75
Dissimilarity	30.15	28.90

Food preference similarity and dissimilarity of parents and children were further analyzed according to fathers and mothers as related to both sexes of children combined. A comparison of father-child food preference similarity and dissimilarity and mother-child food preference similarity and dissimilarity is presented in Table 10. These findings reveal that when no distinction is made between sex of child, no discernible patterns of differences between the percentage of mother-child and father-child food preference similarity and dissimilarity were evident.

Table 10. Comparison of Father-Child Food Preference Similarity and Dissimilarity and Mother-Child Food Preference Similarity and Dissimilarity.

Food Group	Father-Child	Mother-Child
All Foods		
Similarity of Likes	75.50	74.50
Similarity of Dislikes	3.40	3.25
Dissimilarity	21.10	22.25
Meat and Meat Substitutes		
Similarity of Likes	78.65	74.00
Similarity of Dislikes	2.00	2.85
Dissimilarity	19.35	23.15
Breads and Cereals		
Similarity of Likes	75.35	72.15
Similarity of Dislikes	4.35	5.45
Dissimilarity	20.30	22.40
Dairy Foods		
Similarity of Likes	78.10	79.15
Similarity of Dislikes	1.55	2.60
Dissimilarity	20.35	18.25
Fruits		
Similarity of Likes	84.10	84.60
Similarity of Dislikes	2.80	1.50
Dissimilarity	13.10	13.90
Vegetables		
Similarity of Likes	65.50	66.80
Similarity of Dislikes	5.15	3.50
Dissimilarity	29.35	29.70

SUMMARY AND DISCUSSION

Summary

Recognition of the influence of food preferences among young children upon food consumption behavior and growth and development has led many investigators to search for variables contributing to the development of these preferences. In addition to physiological and sensory variables, the attitudinal components of food preferences have stimulated a wide variety of research.

Of interest in the present study are those research studies which focus upon the relationship between parent attitudes and similarity of food preferences among parents and their children. Several investigators have found evidence that a positive relationship may exist between food preferences of parents and those of their children. In addition, still others have suggested that parental attitudes may be related to food preferences in general. Very few studies, however, have investigated the possible relationship between parent attitudes and parent-child similarities of food preferences.

Although no theoretical framework is present relating parent attitudes to similarity of food preferences among children and their parents, a variety of identification theories suggest that such a relationship may exist. Theories of personality place importance upon identification as the mechanism by which a child imitates, models, or

introjects the behavior of his parents. Although there is agreement in the defining characteristics of identification, the various theories diverge in their emphasis upon the antecedent conditions leading to identification. Three variables have frequently been hypothesized as affecting identificatory learning: parental nurturance, parental punitiveness, and parental power. In addition, recent evidence suggests that the variables of sex of child and sex of parent are important in the identification process. Therefore, these variables may assume considerable importance in any discussion of food preference similarity between parents and children.

The primary purpose of the present study was to explore the relationship between the similarity of food preferences among parents and children and parent attitudes.

The subjects of the present study were thirty-five children enrolled in two preschool programs established by the Family Life Department at Oregon State University, and their parents. A Picture Food Preference Inventory designed for this study was administered to all children and their parents. From these data, food preference similarity scores for each child and his mother and for each child and his father were computed. A modified version of the Parental Attitude Research Instrument was used to measure various dimensions of parent attitudes. The relationship between the parent-child food

preference similarity and parent attitudes with respect to the variables of sex of child and sex of parent served as a basis for the analysis.

The following null hypotheses were tested:

Hypothesis I: There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their fathers.

Hypothesis II. There will be no significant relationships between parent attitudes and similarity of food preferences among boys and their mothers.

Hypothesis III. There will be no significant relationships between parent attitudes and similarity of food preferences among girls and their fathers.

Hypothesis IV. There will be no significant relationships between parent attitudes and similarity of food preferences among girls and their mothers.

The Pearson Product-Moment Correlation Method was used to test all hypotheses. The probability level of .10 or beyond was used as the significance level. Table 11 presents a summary of the significant findings and trends in the data related to each hypothesis tested. In addition, descriptive analyses were employed to explore the food preference similarity and dissimilarity of subjects for each child-parent grouping according to the basic food groups.

Table 11. Summary of the Significant Findings and Trends Related to Hypotheses I, II, III, IV.

Child-Parent Grouping	MOTHER'S ATTITUDES													
	Authoritarian-Control Factor	Fostering Dependency	Seclusiveness of the mother	Excluding Outside Influences	Suppression of Aggression	Suppression of Sexuality	Hostility-Rejection Factor	Marital Conflict	Rejection of Homemaking Role	Irritability	Democratic Factor	Encouraging Verbalization	Equalitarianism	Comradeship and Sharing
Hypothesis I Boy-Father				.42*							.40*	.46**	.39*	
Hypothesis II Boy-Mother											.42*	.55***		
Hypothesis III Girl-Father			.49*											
Hypothesis IV Girl-Mother														
	FATHER'S ATTITUDES													
	Authoritarian-Control Factor	Fostering Dependency	Devotion to Father Role	Excluding Outside Influences	Suppression of Aggression	Suppression of Sexuality	Hostility-Rejection Factor	Marital Conflict	Rejection of Family Life	Rejection of Interaction with Child	Democratic Factor	Encouraging Verbalization	Equalitarianism	Comradeship and Sharing
Hypothesis I Boy-Father														
Hypothesis II Boy-Mother														
Hypothesis III Girl-Father				-.45 [Ⓣ]		.48*								-.59**
Hypothesis IV Girl-Mother					.49*	.44 [Ⓣ]								-.47*

Ⓣ = trend

* = significant at the .10 level

** = significant at the .05 level

*** = significant at the .01 level

Hypothesis I

While there were significant positive relationships between boy-father food preference similarity and mothers' attitudes on the democratic factor dimension ($r = .40$, $p < .10$) and two democratic subscales, encouraging verbalization ($r = .46$, $p < .05$) and equalitarianism ($r = .39$, $p < .10$), there was a significant negative relationship on the authoritarian-control subscale, excluding outside influences ($r = -.42$, $p < .10$). However, there were no significant relationships between boy-father food preference similarity and any other mother or father attitude dimensions.

Hypothesis II

There were significant positive relationships between boy-mother food preference similarity and mothers' attitudes on the democratic factor dimension ($r = .42$, $p < .10$) and one democratic subscale, encouraging verbalization ($r = .55$, $p < .01$). However, there were no significant relationships between boy-father food preference similarity and any other mother or father attitude dimensions.

Hypothesis III

While there was a significant positive relationship between girl-father food preference similarity and fathers' attitudes on one

authoritarian-control subscale, suppression of sexuality ($r = .48$, $p < .10$), there was a significant negative relationship on the democratic subscale, comradeship and sharing ($r = -.59$, $p < .05$). There was also a significant positive relationship between girl-father food preference similarity and mothers' attitudes on one authoritarian-control subscale, seclusiveness of the mother ($r = .49$, $p < .10$). Although there were no significant relationships between girl-father food preference similarity and any other mother or father attitude dimensions, the negative relationship between girl-father food preference similarity, and fathers' attitudes on the authoritarian-control subscale, excluding outside influences, approached significance ($r = -.45$).

Hypothesis IV

While there was a significant positive relationship between girl-mother food preference similarity and fathers' attitudes on one authoritarian-control subscale, suppression of aggression ($r = .49$, $p < .10$), there was a significant negative relationship on the democratic subscale, comradeship and sharing ($r = -.47$, $p < .10$). Although there were no significant relationships between girl-father food preference similarity and any other father or mother attitude dimensions, the positive relationship between girl-mother food

preference similarity and fathers' attitudes on the authoritarian-control subscale, suppression of sexuality approached significance ($r = .44$).

Additional Findings

The percentage similarity of likes predominated greatly over both percentage similarity of dislikes and percentage dissimilarity in each child-parent grouping for all food groups. A very small percentage similarity of dislikes in each child-parent grouping for all food groups was also found.

The fruit food group generally contained the highest percentage similarity of likes and lowest percentage dissimilarity among parents and children, while the vegetable food group generally contained the lowest percentage similarity of likes and highest percentage dissimilarity among parents and children. However, these generalizations must be made with caution, because of the few exceptions found in the child-parent group comparisons and the fact that differences between food groups appear minimal.

When no distinction was made between sex of parent, boys generally had a higher percentage similarity of likes and lower percentage similarity of dislikes and percentage dissimilarity with their parents than did girls. However, when no distinction was made

between sex of child, no discernible patterns of differences between mother-child and father-child food preference similarity were evident.

Discussion

Discussion of the results obtained in this study focuses upon the relationship of the findings to previous research on the similarity of parent-child food preferences and parent attitudes, various theoretical positions of identification, and previous research on food preferences among young children.

Relationship of Findings to Previous Research: Parent-Child Food Preference Similarity and Parent Attitudes

Only one study was found which related directly to the relationship between parent-child food preference similarity and parent attitudes. Bryan and Lowenberg (1958) studied the relationship between father-child food preference similarity and father attitudes. No significant associations between any of the father attributes studied and food preferences similarity between fathers and children were found. The results of the present study, however, contradict these findings in two instances. The contradictions were both with respect to girl-father comparisons: there was a significant positive relationship between girl-father food preference similarity and fathers' attitudes

on one authoritarian-control subscale, suppression of aggression, and a significant negative relationship on the democratic subscale, comradeship and sharing.

The major implication which emerges from these findings is the importance of the sex of child in studying the relationship between father-child food preference similarity and father attitudes. In Bryan and Lowenberg's study, the variable of sex of child was not controlled. Because of this, it seems conceivable that any significant associations between father-child food preference similarity and father attitudes could have been neutralized when they grouped both sexes of children together for analysis.

The importance of considering the sex of child in studying the relationship between parent-child food preference similarity and parent attitudes is further supported by the following additional findings obtained in this study.

- (1) While there were significant positive relationships found between boy-mother food preference similarity and mothers' attitudes on the democratic factor dimension and on one democratic subscale, encouraging verbalization; there were no significant relationships found between girl-mother food preference similarity and mothers' attitudes.
- (2) While there were no significant relationships found between boy-mother food preference similarity and father attitudes,

there was a significant positive relationship found between girl-mother food preference similarity and father attitudes on the authoritarian-control subscale, suppression of aggression, and a significant negative relationship found on the democratic subscale, comradeship and sharing.

- (3) While there was a significant positive relationship found between boy-father food preference similarity and mothers' attitudes on the democratic factor dimensions and on two democratic subscales, encouraging verbalization and equalitarianism, and a significant negative relationship found on the authoritarian-control subscale, excluding outside influence; there was also a significant positive relationship found between girl-father food preference similarity and mothers' attitudes on the authoritarian-control subscale, seclusiveness of the mother.

When taken together, these findings not only support the importance of considering the sex of child, but also the sex of parent in studying the relationship between parent-child food preference similarity and parent attitudes. These findings will be further discussed in the following section in light of various theoretical positions on identification available today.

Relationship of Findings to Theoretical Positions on Identification

In attempting to relate the findings obtained in this study to various theoretical positions on identification, caution must be taken to avoid acceptance of these interpretations without question. Despite the fact that several authoritarian-control and democratic subscales of the PARI were found to be significantly related to parent-child food preference similarity, of the three major factor dimensions - Authoritarian-Control, Hostility-Rejection, and Democratic - only the Democratic factor dimension was significantly related. Furthermore, food preference similarity between parents and their children may not be an accurate reflection of identification, but simply providing information regarding children's food preferences. Still also, the parent attitude dimension measured by the PARI could not be directly equated with the various theories of identification. Therefore, all attempts to relate the significant findings of this study to the theoretical positions on identification must be taken as suggestions only. The discussion which follows will be organized in terms of the specific hypotheses tested.

Hypothesis I

Findings obtained under Hypothesis I indicated that while no significant relationships were found between boy-father food preference

similarity and fathers' attitudes, boy-father food preference similarity was found to be significantly and positively related to mothers' attitudes on the democratic factor dimension and two democratic subscales, encouraging verbalization and equalitarianism. Also, boy-father food preference similarity was found to be significantly and negatively related to mothers' attitudes on one authoritarian-control subscale, excluding outside influences.

If parent-child food preference similarity scores can be used as a measure of identification, and if the democratic factor dimension and the two democratic subscales, encouraging verbalization and equalitarianism, can be used as a measure of parental nurturance and warmth, then the results obtained under Hypothesis I in part support Lynn's (1962) theoretical position regarding the importance of mothers in the identification process of young boys. According to Lynn the mother is the more powerful figure in the identification process. He postulates that both male and female infants first learn to identify with their mothers. Boys, but not girls, must shift from this initial identification with the mother to a cultural role identification. Through a system of rewards and punishments, the mother facilitates the identification process in boys. However, full support of Lynn's position was not evident. Although the nurturant and rewarding component of the mother's power role may be represented by the mother's democratic attitudes, the punitive or punishing component of her role is not

represented in the present findings. In fact, if the authoritarian-control subscale, excluding outside influences, can be used as a measure of punitiveness and control, the significant negative relationship between this subscale and boy-father food preference similarity implies the absence of the punitive component in the mother's power role.

Contrary to Lynn's theoretical position, Johnson (1963) argues for the importance of the father in the identification process of young boys. According to Johnson, the father is the more powerful figure in the identification process. She contends that initially boys and girls identify with the mother. However, after the child's stage of infantile dependency on the mother, the father begins to differentiate his role toward opposite-sexed children. Conversely, the mother does not differentiate her role, but continues to treat children of both sexes in light of her general nurturant and supportive role in the family. The father, however, through the use of rewards and punishments facilitates this identification process. This results in the identification of both males and females with the father in differentiated role relationships. If the mothers' democratic attitudes can be used as a measure of nurturance and support, than Johnson's theoretical position may be supported in part. The mother, treating boys in light of her nurturant and supportive role may facilitate the boy's identification with his powerful father. However, while the nurturant and supportive

role of the mother may be supported by the significant relationships found between mothers' attitudes and boy-father food preference similarity, the non-significant relationships found between fathers' attitudes and boy-father food preference similarity, do not provide evidence in support of the father's power role in the family.

Hypothesis II

Findings obtained under Hypothesis II indicated that while a significant positive relationship was found between boy-mother food preference similarity and mothers' attitudes on the democratic factor dimension and one democratic subscale, encouraging verbalization; no significant relationships were found between boy-mother food preference similarity and fathers' attitudes.

As suggested previously, if parent-child food preference similarity scores can be used as an indication of identification, and democratic attitudes among parents used to represent parental nurturance and warmth, then the results obtained under Hypothesis II can be used to support the social learning theory of identification. Some social learning theorists (Mower, 1950, Sears 1957) interpret identification as a process based on the child's desire to reproduce the behavior of a warm and nurturant parent. The finding that there was a significant positive relationship between boy-mother food preference similarity and mothers' attitudes on the democratic factor dimension, and the

democratic subscale, encouraging verbalization, may provide support for this theoretical position.

Hypothesis III

Findings obtained under Hypothesis III indicated that a significant positive relationship was found between girl-father food preference similarity and mothers' attitudes on the authoritarian-control subscale, seclusiveness of the mother. Furthermore, it was found that there was a significant positive relationship between girl-father food preference similarity and fathers' attitudes on the authoritarian-control subscale, suppression of sexuality; and a significant negative relationship on the democratic subscale, comradeship and sharing.

Working from the assumption that girl-father food preference similarity represents a measure of identification and that the authoritarian-control subscale, seclusiveness of the mother, represents aspects of punitiveness and control, the results obtained regarding the significant positive relationship found between these two variables, offers some support for the social learning theory of identification. On the basis of this theoretical position, it has been argued that punitiveness on the part of mothers facilitates girls' identification with their fathers, if their fathers are warm and nurturant. However, this particular theoretical position is not supported when we consider the additional findings regarding the significant positive relationship found

between girl-father food preference similarity and fathers' attitudes on the authoritarian-control subscale, suppression of sexuality; and a significant negative relationship on the democratic subscale, comradeship and sharing. If we can assume that the authoritarian-control subscale, suppression of sexuality, measures aspects of punitiveness and control, and the democratic subscale measures aspects of nurturance and warmth on the part of fathers, then these findings suggest that the father's punitiveness rather than his nurturance is related to girl-father food preference similarity. These findings, therefore, may provide some support for the psychoanalytic theory of identification. According to this theoretical position, parental punitiveness is the primary antecedent condition leading to identification. However, consideration of fathers' attitudes on other authoritarian-control subscales indicate a tendency for the subscale, excluding outside influences, to be negatively related to girl-father food preferences similarity. This finding contradicts what would be expected on the basis of psychoanalytic theory.

Hypothesis IV

Findings obtained under Hypothesis IV indicated that while there were no significant relationships between girl-mother food preference similarity and mothers' attitudes, there was a significant positive relationship between girl-mother food preference similarity and

fathers' attitudes on the authoritarian-control subscale, suppression of aggression, and a significant negative relationship on the democratic subscale, comradeship and sharing.

Given the assumptions that girl-father food preference similarity is a measure of identification, that the authoritarian-control subscale, suppression of aggression, represents aspects of punitiveness and control, and that the democratic subscale, comradeship and sharing represents aspects of nurturance and warmth, then the significant findings regarding the relationship between fathers' attitudes and girl-mother food preference similarity may be interpreted according to social learning theory. On the basis of this theoretical position, it can be argued that punitiveness on the part of fathers facilitates girls' identification with their mothers, if their mothers are warm and nurturant. However, this particular theoretical position is not supported when we consider the additional findings of no significant relationships between girl-mother food preference similarity and mothers' attitudes.

In contrast to social learning theory, Johnson (1963) interprets the identification process differently. According to Johnson, it is not the mother's nurturance or the father's punitiveness that leads to identification, but the father's power. Power, in this theoretical position, may be defined as both nurturant and controlling or rewarding and punishing. Johnson indicates that initially boys and girls

identify with their mothers. However, after this stage of dependency on the mother, the powerful father begins to differentiate his role toward the opposite sexed child. The mother does not do this, but continues to treat children of both sexes in light of her nurturant and supportive role in the family. Through a system of rewards and punishments, however, the father facilitates the identification process in young girls. This results in the identification of both males and females with the father in differentiated role relationships.

The finding in the present study regarding the significant relationships between girl-father food preference similarity and fathers' attitudes provide only partial support for Johnson's theory. Although the punitive component of the father's power role may be represented by the father's authoritarian-control attitude, suppression of aggression, the rewarding component of the father's power role is not represented. In fact, if the democratic subscale, comradeship and sharing is taken as a measure of rewarding behavior, the significant negative relationship between this subscale and girl-mother food preference similarity implies the absence of rewarding behavior in the father's power role. Furthermore, consideration of father attitudes on other authoritarian-control subscales, indicates a tendency for the suppression of sexuality subscale to be positively related to girl-father food preference similarity. This finding gives further support to the punitive component of the father's power role.

In reference to the relationship between mothers' attitudes and girl-mother food preference similarity, the finding of no significant relationships is counter to what would be expected on the basis of Johnson's theory. According to Johnson's theory, mothers' nurturance and support are crucial in the identification process of young girls.

Summary

In attempting to relate the findings obtained in this study to various theoretical positions on identification, the discussion suggests that no one theoretical position could encompass the significant findings and trends exposed in these analyses. One implication that can be drawn from this discussion is the fact that various theories of identification may not be comprehensive enough to fully explain the dynamics of the identification process. Specifically, the findings of this study regarding the importance of the sex of child and sex of parent in studying the relationship between parent-child food preference similarity and parent attitudes, suggest that future theoretical discussions on identification focus on consideration of the interaction of these sex variables in the identification process. Generally, the findings of this study suggest that mothers' democratic attitudes seem related to boy-father and boy-mother food preference similarity,

while fathers' authoritarian-control attitudes seem related to girl-father and girl-mother food preference similarity.

Caution must be indicated, however, in using the findings in this study as support or non-support of a particular theory of identification. Food preference similarity between parents and children may not be valid as a measure of identification, but can be used only as a means for studying the development of food preferences among young children. Furthermore, utilization of the PARI to study the antecedent conditions of identification is both limited and limiting.

Additional Findings: Food Preferences Among Young Children

Several findings resulting from a descriptive analysis exploring food preference similarity and dissimilarity among parents and children according to the basic food groups found in the PFPI support previous research findings in this area. The high percentage similarity of likes, as opposed to similarity of dislikes and dissimilarity of food preferences among parents and children is in part consistent with previous research. Lamb and Ling (1946) in studying preschool aged children's food preferences found that these children had already learned to like a wide variety of foods, and indicated more foods as being pleasant to them than unpleasant or neutral. Furthermore, the general tendency for the vegetable group to reflect a low percentage

food preference similarity of likes among parents and children supports the earlier observation that children have a common disliking for vegetables (Bryan and Lowenberg, 1958; Glaser, 1957; Lamb and Ling, 1946; Vance, 1933; Van Duyne, 1963). However, the general tendency for the fruit group to have the highest percentage food preference similarity of likes among parents and children is not coincident with previous research. In previous research no discernible pattern was observed with respect to the liking or disliking of fruits (Zunich, 1969; Breckenridge, 1959; Lamb and Ling, 1946).

In addition to these findings, data revealed that boys generally have a higher percentage similarity of likes and lower percentage similarity of dislikes of food preferences with their parents than do girls. These results support the studies of Wallen (1943) and Smith, et al. (1955) which indicated the tendency for female subjects to have more food aversions than male subjects. The present finding indicating no discernible pattern of differences between mother-child and father-child food preference similarity, could not be related to previous research, since studies focused on this dimension of food preferences among young children were not found in the literature.

Limitations of the Study

Although attempts were made to overcome a number of limitations in the present study, a variety of problems were encountered which may have influenced the results obtained. These limitations are briefly discussed under the subheadings of the Sample, the Children's Picture Food Preference Inventory, the Parents' Picture Food Preference Inventory, the Parental Attitude Research Instrument, and Control of Variables.

Sample

The major limitations encountered in reference to the sample of the present study include 1) restriction of the sample to the middle and upper socioeconomic classes, 2) restriction of the sample to children of university-oriented families, 3) restriction of the sample to children from the Caucasian race, and 4) the sample size.

The representation of subjects from middle and upper socioeconomic classes, university-oriented families, and the Caucasian race considerably limits generalization of the findings to a larger, more varied population. Furthermore, although sex differences were considered, the resulting groups were limited in size, thus inferences drawn on the basis of these analyses must be taken with caution.

Children's Picture Food Preference Inventory

The PFPI, although developed and validated by means of a pilot study, was untried and without the support of previous research studies. The sometimes transient characteristics of preschool aged children's food preferences (Ilg, 1948; Lamb and Ling, 1946; Dierks and Morse, 1965; McCarthy, 1935) coupled with the effect of their physiological state during testing, may have yielded results which reflected only momentary attitudes. The lack of olfactory stimuli may have also significantly affected the preschool aged child's response toward the picture of any given food item shown. Furthermore, while pictures of the food items which made up the PFPI were both attractive, realistic, and clear in their representation of a specific food item, the children's food preferences may still have been affected by the differences in a variety of visual cues in them.

In addition to these possible influences, some actual problems were encountered during the testing procedure which suggest a need for further refinement of the instrument. During administration of the test, the researcher noted that in several instances the child responded favorably to the food itself, but disliked the manner in which the food was prepared or pictured. For example, a child said he liked ham but did not like it with the rind shown with it. Similarly, several children qualified their answers by stating that they liked the

food only when accompanied by a particular sauce or seasoning. Thus, it became apparent to the researcher that the instrument did not provide information to the extent that might be possible with pre-school aged children. It also introduces the possibility that some negative responses may have been elicited for children by the specific pictures rather than an actual dislike of the food. Furthermore, findings in this study indicated that children's likes for food predominated over their dislikes. This suggests that the number of food items included in the PFPI may not have been large enough to provide the researcher with accurate information concerning children's food dislikes.

Another limitation encountered during the test was the number of ambiguous responses obtained from the children. In several instances, the response of "I don't know" had to be pursued along lines of how the child thought he might like it. Because of these problems, tape recordings of the test sessions became very valuable. Consultation with child development specialists became necessary to establish a definite response in several cases.

Parents' Picture Food Preference Inventory

Several major limitations may have been operative when administering the PFPI to parents. Although instructions were designed to foster honest responses, there still remains the possibility for

responding to the items on the PFPI according to social convention. Furthermore, although parents were asked not to discuss their testing experience with other parents until all parents were tested, the close friendships among families within each of the preschool groups over the school year, and the fact that mothers and fathers were seated together during testing may have affected their responses.

In addition to these possible limitations, several areas of difficulties were exposed during the test situation. Instructions indicated that if confusion should arise as to the type or variety of the food item shown, the response should be directed toward that variety commonly served at home. However, several questions by parents indicated that this instruction needed greater emphasis. Another major limitation which became apparent during the testing was the restriction imposed by the fairly rigid visual representation of the food item shown. Parents often asked if the food item had a particular sauce or seasoning. The parents were thus directed to respond to the item as perceived by them. Although these responses were accounted for in the additional data collected from the parents, the actual circled response at times appeared to be dependent upon whether or not the parent assumed the added ingredient was present. It would seem that the children visualized the added sauce, such as cheese on macaroni, if that is how the food is served to them, whereas the parents may have assumed the food to be plain. These discrepancies may have

affected the resulting parent-child food preference similarity scores.

Finally, the presence of a neutral category in the parents' PFPI proved difficult to interpret and, at the suggestion of the statistician, was eliminated from the data. Although the final similarity score was based on the total possible similarity of food preferences among parents and their children after the neutral responses were eliminated, the presence of this neutral category may have markedly affected the results obtained on parents' food preferences.

Parental Attitude Research Instrument

Reliability measures on the PARI are relatively low. This relatively low reliability may have considerably affected the results of this study, thus inferences drawn from them must be taken with caution. Also, the parent attitude dimensions measured on the PARI could not be directly equated with the antecedent conditions of identification, thus interpretations made regarding the relationship between the present findings and these antecedent conditions remain equivocal.

In addition to these problems, several limitations were revealed during the administration of the PARI to parents. Several parents expressed their frustration in trying to fit their attitude into one of the four categories indicated in the PARI. Others wished for more explicit terminology and felt that the statements were too general and oversimplified. In light of these expressed feelings, the results of

this study must be viewed with the recognition of these varied unknown parental perceptions and interpretations.

Control of Variables

A number of environmental variables which may be pertinent to the present study were left uncontrolled. These include sibling status, ordinal position, food preferences of siblings, and family meal patterns. McCarthy (1935) points to the influence of siblings upon a child's food preference behavior, while others (Duncker, 1938; Marinho, 1942) suggest the importance of the peer group in food preference behavior of children at the nursery school level. Since it has been postulated that imitation is favored under factors such as prestige and age, ordinal position may be an important variable to consider in children's food preference behavior. Another variable left uncontrolled is the family meal time pattern. Whether or not the child eats alone, with siblings only, with one parent only, or with the entire family group could indeed influence the parent-child food preference similarities.

Finally, selection of children used in this study came from two preschool groups. One preschool group met in the morning while the other preschool group met in the afternoon. Teachers in these two preschool groups differed from one another and no attempt was made to control for this variable. Furthermore, while the two preschool

programs were similar in providing educational experiences for children, only the morning preschool group had a noon meal in their program. This may have markedly affected the children's food preferences.

Suggestions for Further Research

The results obtained and the limitations encountered in the present study suggest several implications for further research.

Employment of a larger sample in order to further clarify the sex differences found in the relationship between food preference similarity and parent attitudes is suggested. The use of a larger sample would also allow for the control of such variables as sibling status and ordinal position, both of which may effect imitation as suggested in the review of literature.

In reference to the Picture Food Preference Inventory, several implications emerge. A wealth of data has been collected by means of the parents' PFPI, and the opportunities for further exploration are many. The parents were asked to indicate in the blanks provided those methods of preparation or combination with other foods which would either increase or decrease their indicated preference for the food. . . These alternatives provided information for interpreting further the apparent degree of similarity between parent and child. For example, a subject may have indicated a dislike for many foods as shown, but

upon examination, the data may have indicated that the foods are actually liked if included in combination with other foods or prepared in special ways. Furthermore, from these same alternative responses, indications of flexibility or adaptability could be exposed. These traits, in themselves, may bear important influence on food preference similarity between parent and child.

An additional analysis of children's likes and dislikes apart from those of their parents is another possibility for future research. An interesting approach would be to study food aversion frequency of both parents and children in relation to parental attitudes.

It is also suggested for future research that the neutral category in the parents' PFPI be eliminated since no neutral category was present in the children's instrument. However, it may also be possible to expand the children's instrument to include a neutral category since the testing experience revealed that children do give indications of neither liking nor disliking a particular food. Furthermore, the children's instrument could be expanded to include similar response alternatives to the parents' instrument regarding other ways of eating the food.

Since other investigators have measured food preferences of young children by parental interview, it would seem valuable to compare children's actual food preferences with their parents' perception of these preferences.

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APPENDICES

APPENDIX A

FOOD ITEMS IN THE PFPI INCLUDING PERCENT OF
AGREEMENT BETWEEN PRE- AND POST-TEST
PREFERENCES FOR ALL SUBJECTS

Item	Percent Agreement	Item	Agreement
1. Bacon	88	24. Orange juice	88
2. Cooked carrots	88	25. Lettuce	88
3. Broccoli	100	26. Macaroni	94
4. Apricots	82	27. Toast	94
5. Banana	94	28. Tomato juice	88
6. Onions	82	29. Shredded wheat	65
7. Rolls	94	30. Strawberries	82
8. Boiled potato	88	31. Cottage Cheese	94
9. Baked beans	88	32. Pork chop	82
10. Tomato	88	33. Orange	88
11. Swiss cheese	88	34. American cheese	88
12. Beets	76	35. Grapefruit	82
13. Spinach	88	36. Pear	88
14. Milk	94	37. Green beans	88
15. Ham	76	38. Ice cream	100
16. Meat patties	88	39. Meat	82
17. White bread	88	40. Liver	82
18. Corn flakes	100	41. Carrot sticks	94
19. Prunes	88	42. Peas	76
20. Egg	82	43. Oatmeal	94
21. Apple	94	44. Muffin	100
22. Baked potato	88	45. Whole wheat bread	82
23. Chicken	88		

Average percent agreement 87.7%

APPENDIX B

PARENTAL ATTITUDE RESEARCH INSTRUMENT

In cooperation with the Child Development Laboratory we are studying what parents think about how children ought to be brought up. A lot is written on this subject in various newspaper and magazine articles. Frequently these articles are not in agreement. We would like to find out what parents themselves think. You can help by passing on your own ideas. Be frank and give your personal views regardless of what others may think. So as not to use too much of your time we have a list of ideas which other mothers and fathers have contributed. You merely circle one of the four letters by each statement. Circle large "A" if you strongly agree, the small "a" if you mildly agree, the small "d" if you mildly disagree, the large "D" if you strongly disagree. If you have any ideas which you feel should be included jot them down at the end. We would appreciate having them. Others who have given us their ideas say that it is best to work rapidly. Give your first reaction. If you read and reread the statements it tends to be confusing and you can't finish in the amount of time we have.

Parent _____

INVENTORY OF ATTITUDES ON FAMILY LIFE AND CHILDREN

Read each of the statements below and rate them as follows:

strongly agree	mildly agree	mildly disagree	strongly disagree
-------------------	-----------------	--------------------	----------------------

Indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree.

There are no right or wrong answers, so answer according to your own opinion. It is very important to the study that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

(FATHER FORM)

	Agree		Disagree	
1. A good father should shelter his child from life's little difficulties.	A	a	d	D
2. Children should be taught about sex as soon as possible.	A	a	d	D
3. People who think they can get along in marriage without arguments just don't know the facts.	A	a	d	D
4. Parents should not have to earn the respect of their children by the way they act.	A	a	d	D
5. A man can't do a father's job and have an active social life too.	A	a	d	D
6. Most fathers are content to be with children in their spare time.	A	a	d	D
7. A child has a right to his own point of view and ought to be allowed to express it.	A	a	d	D
8. If a parent is wrong he should admit it to his child.	A	a	d	D
9. A child should be taught to avoid fighting no matter what happens.	A	a	d	D
10. Most fathers could spend all day with the children and remain calm and even-tempered.	A	a	d	D
11. Parents who are interested in hearing about their children's parties, dates, and fun help them grow up right.	A	a	d	D

-2-

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|-----|---|---|---|---|---|
| 12. | A child should learn that he has to be disappointed sometimes. | A | a | d | D |
| 13. | It is very important that young boys and girls not be allowed to see each other completely undressed. | A | a | d | D |
| 14. | If a couple really loves each other there are very few arguments in their married life. | A | a | d | D |
| 15. | Parents should adjust to the children some rather always expecting the children to adjust to the parents. | A | a | d | D |
| 16. | A good father still has time for activities outside the job and home. | A | a | d | D |
| 17. | Settling down to family life is hard for a man because it means giving up so many other things. | A | a | d | D |
| 18. | Children should not be allowed to disagree with their parents, even if they feel their own ideas are better. | A | a | d | D |
| 19. | It's best for the child if he never gets started wondering whether his father's views are right. | A | a | d | D |
| 20. | A child should be taught to fight his own battles. | A | a | d | D |
| 21. | It's no wonder men reach the boiling point when they come home and run immediately into family problems. | A | a | d | D |
| 22. | Children would be happier and better behaved if parents would show less interest in their affairs. | A | a | d | D |
| 23. | A child should be protected from jobs which might be too tiring or hard for him. | A | a | d | D |
| 24. | Sex play is a normal thing in children. | A | a | d | D |
| 25. | Sometimes it's necessary for a husband to tell off his wife in order to get his rights. | A | a | d | D |
| 26. | Children should learn to compromise and adjust to the demands of their parents. | A | a | d | D |
| 27. | Too many men forget that a father's place is with his family. | A | a | d | D |
| 28. | Most fathers don't mind spending most of their spare time at home. | A | a | d | D |
| 29. | A child's ideas should be seriously considered in making family decisions. | A | a | d | D |
| 30. | A child should be encouraged to look for answers to his questions from other people even if the answers contradict his parents. | A | a | d | D |

-3-

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|--|---|---|---|---|
| 31. Children should not be encouraged to box or wrestle because it often leads to trouble or injury. | A | a | d | D |
| 32. Raising children is an easy job. | A | a | d | D |
| 33. If parents would have fun with their children, the children would be more apt to take their advice. | A | a | d | D |
| 34. Children have to face difficult situations on their own. | A | a | d | D |
| 35. Sex is one of the greatest problems to be contended with in children. | A | a | d | D |
| 36. Almost any problem can be settled by quietly talking it over. | A | a | d | D |
| 37. There is no reason parents should have their own way all the time, any more than that children should have their own way all the time. | A | a | d | D |
| 38. A father can be a family man and still have plenty of time left over to visit with neighbors and friends. | A | a | d | D |
| 39. One of the bad things about raising children is that you aren't free enough of the time to do just as you like. | A | a | d | D |
| 40. Children should be discouraged from telling their parents about it when they feel family rules are unreasonable. | A | a | d | D |
| 41. The child should not question the thinking of his parents. | A | a | d | D |
| 42. It's quite natural for children to hit one another. | A | a | d | D |
| 43. There are times when a father feels he can't stand his family a moment longer. | A | a | d | D |
| 44. Laughing at children's jokes and telling children jokes usually fail to make things go more smoothly. | A | a | d | D |
| 45. Children should be kept away from all hard jobs which might be discouraging. | A | a | d | D |
| 46. Children are normally curious about sex. | A | a | d | D |
| 47. It's natural to have quarrels when two people who both have minds of their own get married. | A | a | d | D |
| 48. It is rarely possible to treat a child as an equal. | A | a | d | D |
| 49. A good father will find enough social life within the family. | A | a | d | D |

-4-

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|-----|---|---|---|---|---|
| 50. | Most fathers are pretty content with home life. | A | a | d | D |
| 51. | When a child is in trouble he ought to know he won't be punished for talking about it with his parents. | A | a | d | D |
| 52. | A good father can tolerate criticism of himself, even when the children are around. | A | a | d | D |
| 53. | Most parents prefer a quiet child to a "scrappy" one. | A | a | d | D |
| 54. | A father should keep control of his temper even when children are demanding. | A | a | d | D |
| 55. | When you do things together, children feel close to you and can talk easier. | A | a | d | D |

INVENTORY OF ATTITUDES ON FAMILY LIFE AND CHILDREN

Read each of the statements below and rate them as follows.

A	a	d	D
strongly agree	mildly agree	mildly disagree	strongly disagree

Indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree.

There are no right or wrong answers, so answer according to your own opinion. It is very important to the study that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

(MOTHER FORM)

	Agree	Disagree		
1. A good mother should shelter her child from life's little difficulties.	A	a	d	D
2. Children should be taught about sex as soon as possible.	A	a	d	D
3. People who think they can get along in marriage without arguments just don't know the facts.	A	a	d	D
4. Parents should not have to earn the respect of their children by the way they act.	A	a	d	D
5. The women who want lots of parties seldom make good mothers.	A	a	d	D
6. Most mothers are content to be with children all the time.	A	a	d	D
7. A child has a right to his own point of view and ought to be allowed to express it.	A	a	d	D
8. If a parent is wrong he should admit it to his child.	A	a	d	D
9. A child should be taught to avoid fighting no matter what happens.	A	a	d	D
10. Most mothers can spend all day with the children and remain calm and even-tempered.	A	a	d	D
11. Parents who are interested in hearing about their children's parties, dates, and fun help them grow up right.	A	a	d	D
12. A child should learn that he has to be disappointed sometimes.	A	a	d	D

-2-

- | | | | | | |
|-----|---|---|---|---|---|
| 13. | It is very important that young boys and girls not be allowed to see each other completely undressed. | A | a | d | D |
| 14. | If a couple really loves each other there are very few arguments in their married life. | A | a | d | D |
| 15. | Parents should adjust to the children some rather than always expecting the children to adjust to the parents. | A | a | d | D |
| 16. | A good mother should develop interests outside the home. | A | a | d | D |
| 17. | One of the worst things about taking care of a home is a woman feels that she can't get out. | A | a | d | D |
| 18. | Children should not be allowed to disagree with their parents, even if they feel their own ideas are better. | A | a | d | D |
| 19. | It's best for the child if he never gets started wondering whether his mother's views are right. | A | a | d | D |
| 20. | A child should be taught to fight his own battles. | A | a | d | D |
| 21. | Children will get on any woman's nerves if she has to be with them all day. | A | a | d | D |
| 22. | Children would be happier and better behaved if parents would show less interest in their affairs. | A | a | d | D |
| 23. | A child should be protected from jobs which might be too tiring or hard for him. | A | a | d | D |
| 24. | Sex play is a normal thing in children. | A | a | d | D |
| 25. | Sometimes it's necessary for a wife to tell off her husband in order to get her rights. | A | a | d | D |
| 26. | Children should learn to compromise and adjust to the demands of their parents. | A | a | d | D |
| 27. | Too many women forget that a mother's place is in the home. | A | a | d | D |
| 28. | Most young mothers don't mind spending most of their time at home. | A | a | d | D |
| 29. | A child's ideas should be seriously considered in making family decisions. | A | a | d | D |
| 30. | A child should be encouraged to look for answers to his questions from other people even if the answers contradict his parents. | A | a | d | D |
| 31. | Children should not be encouraged to box or wrestle because it often leads to trouble or injury. | A | a | d | D |

-3-

- | | | | | |
|--|---|---|---|---|
| 32. Raising children is an easy job. | A | a | d | D |
| 33. If parents would have fun with their children, the children would be more apt to take their advice. | A | a | d | D |
| 34. Children have to face difficult situations on their own. | A | a | d | D |
| 35. Sex is one of the greatest problems to be contended with in children. | A | a | d | D |
| 36. Almost any problem can be settled by quietly talking it over. | A | a | d | D |
| 37. There is no reason parents should have their own way all the time, any more than that children should have their own way all the time. | A | a | d | D |
| 38. A mother can keep a nice home and still have plenty of time left over to visit with neighbors and friends. | A | a | d | D |
| 39. One of the bad things about raising children is that you aren't free enough of the time to do just as you like. | A | a | d | D |
| 40. Children should be discouraged from telling their parents about it when they feel family rules are unreasonable. | A | a | d | D |
| 41. The child should not question the thinking of his parents. | A | a | d | D |
| 42. It's quite natural for children to hit one another. | A | a | d | D |
| 43. Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 44. Laughing at children's jokes and telling children jokes usually fail to make things go more smoothly. | A | a | d | D |
| 45. Children should be kept away from all hard jobs which might be discouraging. | A | a | d | D |
| 46. Children are normally curious about sex. | A | a | d | D |
| 47. It's natural to have quarrels when two people who both have minds of their own get married. | A | a | d | D |
| 48. It is rarely possible to treat a child as an equal. | A | a | d | D |
| 49. A good mother will find enough social life within the family. | A | a | d | D |
| 50. Most young mothers are pretty content with home life. | A | a | d | D |

-4-

51. When a child is in trouble he ought to know he won't be punished for talking about it with his parents. A a d D
52. A good mother can tolerate criticism of herself, even when the children are around. A a d D
53. Most parents prefer a quiet child to a "scrappy" one. A a d D
54. A mother should keep control of her temper even when children are demanding. A a d D
55. When you do things together, children feel close to you and can talk easier. A a d D

APPENDIX C

INSTRUCTIONS FOR ADMINISTRATION OF THE PICTURE
FOOD PREFERENCE INVENTORY TO PARENTSWritten Instructions

Each food item on your answer sheet refers to a picture you will observe on the screen. After you observe each picture you are asked to respond to it according to your preference for the particular food shown. Your response to each picture is made in terms of one of five categories. The five categories are:

Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much
1	2	3	4	5

Your response to each food item is to be made only on the basis of the food prepared as pictured. As you mark your response do not consider any other method of preparation or combination with other foods.

You are to indicate your response by circling the appropriate category for the item listed. Circle only one category per item.

If you are not allowed to eat a food because of health or religious reasons, do not mark it as dislike unless you personally dislike its taste, e. g., if you really like spinach but cannot eat it because of health reasons, mark that you like it. Also, if you have never tasted the item, respond to it according to how well you think you might like it. We have provided a place at the right of each item for you to indicate if either health reasons, religious reasons, or unfamiliarity apply for this item. Letters H, R, and U refer to these possibilities respectively. Check the appropriate letter if one of these apply. An example of this follows:

Health	Religious	Unfamiliarity
H	R	U

After responding to the item in terms of your preference, you are asked to indicate in the blank space provided other methods of preparation or combinations with other foods which would either increase or

decrease your preference for the food. List as many different ways as you wish, but you may leave the space blank if there are no other preparations which would change your original response.

If confusion arises as to the type or variety of the food item shown, you may assume in stating your preference that the item shown is of the type you commonly serve at home, e. g., a glass of milk may be either whole or skimmed depending upon what you serve at home most frequently. However, when you indicate alternative preparations state these other types or varieties if they make a difference in your preference.

Oral Instructions

Please turn to the next page and enter your name in the blank provided on the answer sheet.

All data collected will be kept confidential.

Let us begin with a few example items. I will project the first example on the screen. This is example A, sweet potato. As you observe this food as prepared in this picture, indicate your degree of preference.

Now, we recognize that there are many other ways of incorporating this food into a meal, so indicate as many changes as you can in the preparation which would increase your preference for this food as stated. For example, perhaps you would like the sweet potato better if it were mashed with sugar and spices. If you can't think of any other preparation that would increase your liking, you may leave the space blank.

Next indicate those changes in preparation which would decrease your stated preference. For example, perhaps you would not care as much for the sweet potato if it were incorporated into a stew. Again, if no other preparation would change your response, an answer is not necessary.

Do you have any questions?

This is example B, a soft-cooked egg.

Do you like the egg fixed this way? Indicate your response.

Now indicate those ways you would like it better or like it less.
Perhaps you only like eggs fried or scrambled.

This is example C, roast lamb.

Now answer example C.

Are there any questions before beginning the test items?

TEST ITEMS:

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
1. <u>Bacon</u>	1	2	3	4	5	Health	Religious	Unfamiliarity
Increase preference if:	_____							
	_____					H	R	U

Decrease preference if:	_____							

2. <u>Cooked</u> <u>Carrots</u>	1	2	3	4	5			
Increase preference if:	_____							
	_____					H	R	U

Decrease preference if:	_____							

3. <u>Broccoli</u>	1	2	3	4	5			
Increase preference if:	_____							
	_____					H	R	U

Decrease preference if:	_____							

4. <u>Apricots</u>	1	2	3	4	5			
Increase preference if:	_____							
	_____					H	R	U

Decrease preference if:	_____							

5. <u>Panana</u>	1	2	3	4	5			
Increase preference if:	_____							
	_____					H	R	U

Decrease preference if:	_____							

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much
6. <u>Onions</u>	1	2	3	4	5

Increase preference if: _____

Decrease preference if: _____

Health	Religious	Unfamiliarity
H	R	U

7. <u>Rolls</u>	1	2	3	4	5
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Increase preference if: _____

Decrease preference if: _____

H	R	U
---	---	---

8. <u>Boiled Potatoes</u>	1	2	3	4	5
-------------------------------	---	---	---	---	---

Increase preference if: _____

Decrease preference if: _____

H	R	U
---	---	---

9. <u>Baked Beans</u>	1	2	3	4	5
-----------------------	---	---	---	---	---

Increase preference if: _____

Decrease preference if: _____

H	R	U
---	---	---

10. <u>Tomato</u>	1	2	3	4	5
-------------------	---	---	---	---	---

Increase preference if: _____

Decrease preference if: _____

H	R	U
---	---	---

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
11. <u>Swiss Cheese</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

12. <u>Beets</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

13. <u>Spinach</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

14. <u>Milk</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

15. <u>Ham</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
16. <u>Meat Patties</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
17. <u>White Bread</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
18. <u>Corn Flakes</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
19. <u>Prunes</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
20. <u>Egg</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
21. <u>Apple</u>	1	2	3	4	5			
Increase preference if:	_____					Health H	Religious R	Unfamiliarity U

Decrease preference if:	_____							

22. <u>Baked Potato</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

23. <u>Chicken</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

24. <u>Orange Juice</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

25. <u>Lettuce</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
26. <u>Macaroni</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
27. <u>Toast</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
28. <u>Tomato Juice</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
29. <u>Shredded Wheat</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
30. <u>Strawberries</u>	1	2	3	4	5			
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
	1	2	3	4	5			
31. <u>Cottage Cheese</u>								
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
32. <u>Pork Chop</u>								
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
33. <u>Orange</u>								
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
34. <u>American Cheese</u>								
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U
35. <u>Grapefruit</u>								
Increase preference if:	_____							

Decrease preference if:	_____							

						H	R	U

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
36. <u>Pear</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

37. <u>Green Beans</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

38. <u>Ice Cream</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

39. <u>Meat</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

40. <u>Liver</u>	1	2	3	4	5			
Increase preference if:	_____					H	R	U

Decrease preference if:	_____							

	Like Very Much	Like	Neither Like nor Dislike	Dislike	Dislike Very Much			
41. <u>Carrot Sticks</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

42. <u>Peas</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

43. <u>Oatmeal</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

44. <u>Muffin</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

45. <u>Whole Wheat Bread</u>	1	2	3	4	5			
Increase preference if:	_____					Health	Religious	Unfamiliarity

Decrease preference if:	_____					H	R	U

APPENDIX D

FREQUENCY OF LIKE, DISLIKE, AND NEUTRAL RESPONSES FOR
MOTHERS AND FATHERS ON THE PFPI

Mothers	Total Likes	Total Dislikes	Total Neutral	Fathers	Total Likes	Total Dislikes	Total Neutral
1	43	0	2	1	36	5	4
2	34	4	7	2	37	2	6
3	39	5	1	3	30	7	8
4	41	0	4	4	36	4	5
5	26	4	15	5	39	2	4
6	28	1	6	6	28	6	11
7	39	3	3	7	21	10	14
8	24	6	15	8	31	6	8
9	40	1	4	9	25	2	18
10	42	1	2	10	39	2	4
11	27	6	12	11	35	5	5
12	31	8	6	12	32	1	12
13	41	0	4	13	33	10	2
14	29	5	11	14	27	8	10
15	41	0	4	15	43	0	2
16	39	2	4	16	41	1	3
17	39	2	4	17	41	2	2
18	31	2	12	18	27	4	14
19	35	3	7	19	29	5	11
20	37	2	6	20	35	5	5
21	23	9	13	21	31	2	12
22	35	4	6	22	31	5	9
23	24	2	19	23	27	4	14
24	34	5	6	24	24	8	13
25	43	0	2	25	42	1	2
26	28	12	5	26	38	7	0
27	35	3	7	27	37	1	7
28	41	1	3	28	32	1	12
29	35	2	8	29	38	1	6
30	39	3	3	30	38	3	4
31	34	5	6	31	42	1	2
32	40	2	3	32	34	2	9
33	40	2	3	33	34	3	8
34	34	5	6				
35	34	2	9				