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NOBLE, Lucinda Ann, 1931-

STRUCTURAL ANALYSIS OF MOTHERS' ATTITUDES
TOWARD CHILD REARING IN FOUR COMMUNITIES IN
APPALACHIA.

University of North Carolina at Greensboro,
Ph.D., 1969
Sociology, family

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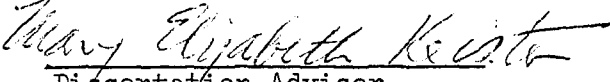
STRUCTURAL ANALYSIS OF MOTHERS' ATTITUDES TOWARD
CHILD REARING IN FOUR COMMUNITIES IN APPALACHIA

by
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A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in partial fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
June, 1969

Approved by


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One of the present needs in parent education is to have an objective means of determining, in a parental education/intervention program, what attitudes are held toward child rearing and family life. This information can then be used as a basis for planning relevant programs for parents. It was with this concern in mind that the study was implemented. The study was an attempt to provide base line information on the attitudes held by mothers in rural, low-level-of-living areas toward child rearing and family life practices.

The purposes of the study were: (1) to present evidence of the validity and reliability of the Parental Attitude Research Instrument (PARI) with a random sample of mothers from a rural, low-level-of-living area of Appalachia; (2) to identify some attitudes of mothers of first grade children toward child rearing and family life as measured by the PARI; and (3) to compare the response to the PARI of the Appalachia mothers with the response given by middle-class mothers in two other selected studies.

The population of this study consisted of a sample of 101 mothers of first grade children in four western counties of North Carolina: Avery, Mitchell, Watauga, and Yancy.

The validation procedure used in the study was construct validation. This involved: (a) determining group differences; (b) studies of change over occasions; (c) studies of internal structure; and (d) observing the test-taking process. Factor analyses were carried out to determine the underlying factors within each of the sub-scales and among the sub-scales. A single analysis of variance was performed on

the mean scores of three groupings of respondents to determine significant group differences relative to age and education of the mother-respondent, occupation of the father, and number of children in the family.

The factor analysis among the sub-scales resulted in the identification of five factors which appeared to underlie a variety of discrete parental attitudes. The five factors were labeled: Contentment-Discontentment, Authoritarian-Control; Confidence-Lack of Confidence; Democratic Attitudes; and Instrumental Role of Parents.

It was concluded from the results of the analysis of variance that the four hypotheses of the research were supported. Namely, that there were differences in mean scores on sub-scales: related to the age of the respondent; related to the educational level of the respondent; related to the occupation of the father; and when the number of children in the family was taken into account.

The results supported the contention that the Parental Attitude Research Instrument is useful as a phase one measuring device. The validation of a reliable instrument with a sample of mothers from a rural, low-level-of-living area of Appalachia was seen as a desirable first step to developing meaningful programs for adults in their roles as parents.

Acknowledgments

This field study required the generous cooperative efforts of many individuals. The student is especially indebted to Dr. Mary Elizabeth Keister, Research Associate, Institute for Child and Family Development, for her encouragement and counsel. The assistance and advice of Dr. Charles H. Proctor, Professor of Experimental Statistics, North Carolina State University at Raleigh, was invaluable in the programming and statistical analysis of the data.

The student acknowledges the vital role played by Dr. Irwin V. Sperry, former Professor and Chairman of the area of Child and Family Development, School of Home Economics, The University of North Carolina at Greensboro, in stimulating and fostering the initial development of the study plan.

Appreciation is expressed to other members of the committee: Dr. Naomi G. Albanese, Dean, School of Home Economics, and Dr. Donald W. Russell, Professor of Education, both at the University of North Carolina at Greensboro, and to Dr. Edgar J. Boone, Head, Department of Adult Education; and Dr. Emily H. Quinn, Professor, Department of Adult Education at North Carolina State University.

Financial assistance was provided by the North Carolina Agricultural Extension Service, and gratitude is expressed to Dr. Eloise Cofer, Assistant Director for Home Economics, for her interest and support.

The cooperation of the Extension staff members in Avery, Mitchell, Watauga, and Yancy Counties along with the county school superintendent and elementary school principals is also gratefully acknowledged.

The careful work of Mrs. Mary Ann Pitman of Bakersville, North Carolina, and Mrs. Arlene Eller, of Newland, North Carolina, as interviewers made the study possible and provided the researcher with valuable insights.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	vii
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	3
Significance of the Problem	5
II. REVIEW OF RELATED LITERATURE	7
The Nature of Parent Education	7
Family Influences on Child Development	11
Socialization and Social Class	12
Measuring Parental Attitudes	16
The Parental Attitude Research Instrument	19
III. PROCEDURES OF THE INVESTIGATION	24
Subjects	24
Pilot Study	33
Interviewers	34
Collection of Data	36
IV. ANALYSIS OF DATA	39
Group Differences	40
Reliability--Studies of Change Over Occasions	56
Reliability--Study of Internal Structures	59
Observations of the Test-Taking Process	64
Correlation Matrices and Factor Analysis	65
Results and Discussion	72
V. SUMMARY AND CONCLUSIONS	77
BIBLIOGRAPHY	81

	Page
APPENDIX A	87
Parent Information Sheet	
APPENDIX B	90
Inventory of Attitudes on Family Life and Children	
APPENDIX C	106
Interview Evaluation Form	
APPENDIX D	108
Retest Questionnaires	
APPENDIX E	117
Modified Form of Parental Attitude Research Instrument	
APPENDIX F	129
A Scheme to Decide on the Number of Items To Retain in a Sub-scale	

LIST OF TABLES

TABLE		Page
1	Families in Four North Carolina Counties Having Children Under Six Years of Age	25
2	Ages of Respondents and of Fathers of First Grade Children	27
3	Number and Ages of Children in Families Interviewed	28
4	Educational Attainment of Respondents and Fathers	29
5	Principal Occupation of Fathers	30
6	Reported Total Spendable Family Income for 1965	31
7	Respondents Who Reported Attending a Meeting or Class Where Children and the Family Were Discussed	32
8	Age of Respondent F Values and Group Mean Scores	42
9	Education of Respondent F Values and Group Mean Scores	45
10	Principal Occupation of the Father F Values and Group Mean Scores	47
11	Number of Children in the Family F Values and Group Mean Scores	50
12	Frequency Distribution of Average Test-Retest Correlations	58
13	Average Correlations for Reliability of Sub-scales	60
14	Frequency Distribution of Sub-scale Reliabilities	64
15	Rotated Factor Matrix of Parental Attitudes	66
16	F Values for Age, Education, Occupation, and Number of Children	74

CHAPTER I

INTRODUCTION

The ultimate aim of parental education programs is to influence in constructive ways the behavior of parents as regards the upbringing of their children, the inherent assumption being that parental attitudes are intricately associated with the development of the child. Theory in the field of child development would indicate that such a relationship between parental attitudes and the child's development does indeed exist. The classic studies by Baldwin, Kalhorn, and Breese (1949) and by Sears, Maccoby, and Levin (1957) among others, have formed the basis for this tenet. The influences of the family and the early home environment have come to be seen as integral factors in shaping the child's future development.

In our predominantly middle-class-oriented society it is more or less assumed that by the time the child reaches school age his parents will have provided for his physical, emotional, and spiritual well-being. It is also taken for granted that parents will provide the basic learning experiences for a child to become somewhat knowledgeable about his immediate environment. However, with the current concern for social problems and emphasis on social legislation, one becomes increasingly aware of the many children in our society who are growing up in a world of poverty and neglect. In addition to any physical problems they may have, disadvantaged children frequently show learning and adjustment difficulties during their often brief school careers. The basic question becomes--what can be done to provide the needed opportunities for these children?

There is increasing evidence that child-rearing practices in lower classes differ in some respects from the practices commonly followed in the middle class (Sears, Maccoby, and Levin, 1957; Bronfenbrenner, 1958). Chilman (1965, pp. 11-12) states:

When the relevant child-rearing patterns of the very poor are compared with those which are found to be conducive to educational achievement, the contrast is striking. While it would be premature and overly simple to conclude that disadvantaged families tend to rear their children for failure in school, evidence accumulated to date points in this direction.

There is growing recognition that the future of the poorly educated individual will continue to be one of poverty unless aggressive steps are taken not only to meet his needs in school but also to investigate some of the destructive influences that sometimes are a part of family attitudes and behavior. What about the situation? Can it be changed to provide a more enriching and supportive environment for the child? Chilman (1966b, p. 13) writes, "Poverty environments are seen as being the most important causative factors in the development of poverty sub-cultures to which these child-rearing and family life patterns are related."

Michael Harrington's book, The Other America, (1962) is credited with having influenced the Economic Opportunity Act of 1964. With the awakening of public interest in the segment of society that is socially, culturally, and educationally disadvantaged, attention was focused on adults as well as children. This awareness has stimulated a rethinking of program emphases in many areas of formal and informal education.

The premises on which Project Head Start was planned and implemented were: (1) that such community pre-school programs would help disadvantaged children meet the challenges of school by learning more about

themselves as well as about the people and activities that make up the larger community in which they live, and (2) that it is important to reach and work with the families while their children are still young. A promotional leaflet on Head Start (Office of Economic Opportunity, 1965, p. 31) states:

It is obvious that parents exercise a tremendous influence on their children's lives. It is essential to tap the reservoirs of love and hope which most of them have for their children. Working together, parents and those who care for their children away from home can reinforce each other's efforts to help the children develop. Without cooperation neither can be fully effective.

The renewed emphasis on rehabilitation as a major aspect of social policy and planning has reawakened an interest on the part of many family-oriented organizations and agencies in the possibility of developing more relevant parent education programs for low-income families (Chilman and Kraft, 1963). If parent education programs are to be developed that will be effective in helping these families achieve a more meaningful life for themselves, then much needs to be known about the attitudes parents hold toward child rearing and family life. It was with this concern for educational programs for the families in poverty that the present study was developed and carried out.

Statement of the Problem

This study was an attempt to describe the attitudes of rural mothers toward child-rearing and family life practices. An attitude instrument was used to collect the information, and factor analysis was done to determine the underlying factors. A number of recognized studies on child-rearing practices have employed urban middle-class samples (Block, 1961; Becker and Krug, 1964b; Leton, 1958; Zuckerman,

Ribback, Monashkin, and Norton, 1958), while relatively few have sampled lower-class mothers (Davis and Havighurst, 1946; Maccoby and Gibbs, 1954; Sears, Maccoby, and Levin, 1957). Bronfenbrenner (1958), in his analysis of results of child-rearing studies over a 25-year period, concluded in part that the differences between the middle class and the working class may be narrowing. However, Bronfenbrenner (1958, p. 424) concluded that "socialization practices are most likely to be altered in those segments of society which have most ready access to the agencies or agents of change . . ." The question that influenced the present study was: What are the attitudes held by rural mothers residing in a low-level-of-living area, mothers who have a more limited access to "agencies or agents of change" because of the geography and existing economic and social conditions of the area?

It is recognized that attitude scales have definite limitations. When appropriately used, however, they are one of the best methods available for describing the feelings (attitudes) respondents have toward child rearing. It was felt that the usual objections to an attitude study might not apply with this group because of the general unsophistication of persons making up this group. In program planning the change agent (parent educator) must start where the recipients are in developing a meaningful program.

The objectives of the present study were threefold: (1) to present evidence of the validity and reliability of the Parental Attitude Research Instrument (PARI) with a random sample of mothers living in a rural, low-level-of-living area of Appalachia; (2) to identify some attitudes of mothers of first grade children toward child rearing and

family life as measured by the PARI; and (3) to compare the response given by middle-class mothers in two other selected studies.

Definition of Terms

Allport's (1935, p. 810) concept of attitude was used in this study. He defined attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."

The term low-level-of-living was employed in this study to denote a relative position on the socio-economic scale. This position was characterized by annual median family incomes below \$3000 and low educational attainment.

Significance of the Problem

The decision as to what is to be presented in parental education programs, formal and informal, is made by the program leader or change agent, based on his belief of what is appropriate for the situation. It is generally recognized that in most situations where parental education is undertaken not enough is known of parental attitudes toward any given aspect of child rearing to use that knowledge as a starting place for discussion. Since the desired outcome of educational endeavors is to change behavior, then it is important to establish a basis for planning and a base line from which a test-teach-test and other future measurements can be made.

One of the present needs in parent education is to have an objective means of determining what attitudes the parents in a program hold toward child rearing and family life. This information can

then be used as a basis for planning a program and as a means of assessing the effectiveness of a given program for parents. It was with this concern in mind that the present study was planned and implemented.

The study was an attempt to draw an attitude profile for the group of rural mothers studied. The validation of a reliable instrument to describe group attitudes toward child rearing was seen as a desirable first step in developing meaningful programs for adults in their roles as parents.

CHAPTER II

REVIEW OF RELATED LITERATURE

The Nature of Parent Education

Brim (1959, p. 20) defined parent education as "an activity using educational techniques in order to effect change in parent role performance." This concept of parent education has had general acceptance in the United States for a century or more. During the past fifty years many organizations and agencies have been recognized as having major parent education interests and programs. Noteworthy among these organizations are Parent Teacher Associations, child study groups, churches, and Cooperative Extension. For the most part, parent education aimed at adults who are parents has taken place outside of educational academic institutions. The mass media are a prime example. Radio and television programs on juvenile delinquency, child care, use of drugs, and child bearing have had messages beamed at parents. The popular press including the women's page of the newspaper, women's magazines, and such publications as Spock's (1957), Baby and Child Care, have been sources of information on child care and development. In a study of sources and types of information and services obtained by rural parents, Sperry and Garner (1962) found that doctors were the chief professional source of information and maternal grandmothers the chief non-professional source.

Brim (1959, p. 20) pointed out that "parent education is customarily employed in the pursuit of a variety of ends." The objectives of

parental education programs have been many and varied but the mental and physical health of the child has usually been a prime consideration. A secondary consideration has been the belief that increased understanding on the part of the parents can mean a more effective and satisfying parenthood (Wolf, 1963, p. 613).

Brim (1959) pointed out that the aims of parent education may be analyzed from both the ethical and the scientific point of view. An analysis raises such questions as: What final values should be sought? What priority should these values have? Who makes the decision regarding desirable values? How does the parent educator go about structuring the program to include these values?

The aims of a parent education effort have been in part dependent on the philosophical framework of the organization or agency sponsoring the program. Such a framework included a set of inferred value judgments which need to be known in order for an observer to recognize why the organization does what it does (why the administrator makes the decisions that he does). If it is an educational organization, the philosophy will include educational goals; if the organization is product oriented, the philosophy will encompass a profit motive. It has generally been accepted, however, that the goals of any parent education program include bringing about certain changes in parent behavior whether they be changes in knowledge, understanding, attitudes, or skills.

Brim (1959, pp. 151-178) described five kinds of discrete "working goals" of parent education programs and the content which is appropriate for attaining them:

WORKING GOAL:	CONTENT
1. of parent who has an understanding of child development	1. information on child development norms
2. of the rule-following parent and the loving and accepting parent	2. use of advice to parents, e.g., modes of handling children
3. of the parent who is to understand his effect upon the child	3. information on general personality development and functioning
4. of the parent who is to increase his problem-solving abilities and also understand the attitudes and feelings which parents have toward particular kinds of behavior characteristics in their children and toward different practices	4. information on the experiences of other parents and the ways in which they have handled different child-rearing situations
5. of the parent who wishes to be a good home manager	5. the information given is to deal not so much with the understanding of one's self, or of children, but rather with practically oriented information on how to avoid home accidents

A primary interest in parent education programs has been to deal with parental differences which stem from attitudes, feelings, and emotions rather than from ignorance or lack of information.

Unlike some other areas of education, that of parent-child relations is concerned primarily not with knowledge, information and facts, but with concepts, ideas, and attitudes (Hereford, 1963, p. 4).

If we accept this premise as valid then an appropriate goal of parent education can be viewed as the changing of attitudes. The content of the educational program is thus regulated by the working goals (Brim, 1959) and in this perspective assumes a secondary role of importance. This reasoning has appealed to many parent educators in view of the

fact that there is no generally accepted body of factual knowledge regarding parent-child relationships (Brim, 1959; Hereford, 1963).

In discussing the task of parent education, Brim stated that it has been

. . . the task of parent education to avoid meeting the demand placed upon it to serve as a new authority and instead to help the parent become more competent and independent in his role. The fact that certain segments of the parent education movement are either unable or do not wish to face this challenge, but instead are gratified to find the parent treating them as a new authority, does not lessen the importance of the fact that parent education on the whole, and especially the programs recognized as outstanding, are concerned with engineering a unique and fundamental change in a major role of our society; namely, with transforming the parental role from one guided by cultural tradition and internalized values to one in which the parent must become, in part, his own judge of good and evil, and seek to develop a highly conscious, rationally determined role performance (Brim, 1959, p. 19).

The nature of parent education may be viewed as somewhat dependent upon the social context of the times. A need develops because of social changes that affect family roles and interpersonal relations. An awareness develops that there are better ways of "educating children for adulthood" (Banta, 1966). Brim (1959) pointed out that historically parent education arose (a) in response to the needs of parents, and (b) in the growing belief that there were better ways of rearing children than those prescribed by tradition. Theory and research data served to open up new areas and provided understanding but "research almost invariably rests on practice (LeShan and LeShan, 1961, p. 31)."

In an attempt to help the parent educator see his function in broader perspective, LeShan and LeShan (1961) examined some social science research as reported in Journals of psychology, anthropology, sociology, and education. They identified the following three major

trends as relevant to the problems of parent education:

1. The deepening understanding of the social pressures that our expanding society places on people, and the attempt at clarification of problems of conformity and individualism.
2. An increased awareness that the existence of value orientations in children depends on their existence in adults, that child-rearing techniques, in themselves, will not create values. The increasing perception of the effects on children of the values of their parents.
3. A gradual realization that no one technique, no one method, no specific research tool, no one point of view, will solve all our problems. As social science research comes of age, we have begun to face the fact that the use of games theory group dynamics, social class theory, information theory, or psychoanalysis, by themselves, will not give all the answers. Each has added to our knowledge; none can do the whole job (LeShan and LeShan, 1961, pp. 31-32).

Family Influences on Child Development

There is a vast literature in the general field of parent-child relationships. A number of texts and collections of readings on child development have reported on studies that have attempted to link family life variables to child behavior variables (Ausubel, 1958; Hoffman and Lippitt, 1960; Crow and Crow, 1962; Mussen, Conger and Kagan, 1963; McCandless, 1967; Medinnus, 1967). One handbook pointed out:

There is no paucity of theories to explain the effects of the family on the child, but there is a paucity of empirical research connected with these theories (Hoffman and Lippitt, 1960, p. 947).

One of the earliest studies that grew out of psychoanalytic theory was by Flugel (1921). This study emphasized the important relationship of early childhood experiences to the personality of the child.

The conclusion was drawn from a study of 72 problem children at

the Philadelphia Child Guidance Clinic that "parental attitudes exert a more important influence on the formation of the child's personality than the actual events of his life (Pearson, 1931, pp. 290-291)."

In the 1940's, investigations of parent-child relationships made a substantial contribution to the field. Important among these were the works of Radke (1946); Baldwin, Kalhorn, and Breese (1945); and Baldwin, Kalhorn, and Breese (1949). More recently social learning theory has incorporated the whole family as an influence on the child's development (Landreth, 1958; Gardner, 1964). Baldwin (1967, p. 539) drew attention to the possibility of "child-rearing practice as the result of the child's behavior" in addition to the traditional point of view of developmental psychology that viewed personality as the result of a child's upbringing.

It is probably impossible, however, to isolate the development of the child from other family variables in studies of human families over time. Such families should be studied, but they must be investigated as units; the investigations must not assume that the changes in the child are developmental processes in the child alone, nor solely caused factors influencing the parents. We must look at families as systems; we must observe the interactions that go on in families and identify them as reinforcements, punishments, and instigations to emotional responses. Knowing the elements of such interactions, we can tackle the problem of describing family development and formulating theories about how the family, including the child himself, develops in a complex society (Baldwin, 1967, p. 573).

Socialization and Social Class

What are the influences on child-rearing? Are there differences in child-rearing practices between parents in different social and economic circumstances? These questions and others have been asked by many researchers including Davis and Havighurst (1946), Ericson (1946),

and Maccoby, et al. (1954). Sears, Maccoby and Levin (1957) focused on these questions in their widely known report on 379 New England middle-class and lower-class mothers. A thoughtful response to the question, 'what are the influences on child rearing?' would include the listing of such influences as: socio-economic status, education and age of parents, family size, ethnic and religious background, accessibility and perceived relevance of community facilities and resources, and overt concern of a nation for children.

In the mid-1960's much was being published about families in poverty (Besner, 1965; AHEA, 1965; Keller, 1965; Chilman, 1966a; Schorr, 1966; Irelan, 1966). Chilman (1965) wrote of "subcultures of poverty" and pointed out that regional, racial, religious, and ethnic differences do exist within the United States. She differentiated between the stable "working class, the employed poor, or the chronically dependent poor." Irelan (1966, p. v) in Low-Income Life Styles, recognized that the value of detailing "characteristic behavior of the poor in certain important life areas" was to inform "people and agencies trying to improve the quality of life for any group of people. 'Improvement' of any situation must be based upon understanding it."

Bronfenbrenner (1958, pp. 400-425) presented a comprehensive analysis of major research studies on social class differences in child rearing conducted during the twenty-five years prior to 1958. Although Bronfenbrenner found class trends in child rearing he also found "indications that the gap between the social classes may be narrowing."

Kohn (1959) studied white working-class and middle-class families in Washington, D. C., and interpreted the relationship of social class

to the exercise of parental authority. This work led Kohn (1959, p. 365) to "believe that the reactions of parents of both social classes to their children's undesired behavior are entirely appropriate to their values." Kohn (1963) later interpreted the concept of "values" as forming a bridge between social position (structure) and behavior. His analysis endeavored to show that

. . . middle-class parental values differ from those of working-class parents; that these differences are rooted in basic differences between middle- and working-class conditions of life; and that the differences between middle- and working-class parental values have important consequences for their relationships with their children. The interpretive model in essence, is: social class - conditions of life - values - behavior (Kohn, 1963, p. 480).

Wortes et al. (1963, p. 306) concluded from their study of lower-class mothers in Brooklyn that

. . . there are characteristics in child-rearing practices which are related to class status, and . . . these differences become more pronounced with the extremes of class.

It appears desirable then not only to make distinctions between the child-rearing practices of social classes but also to look for distinctions within social classes, for example, within a geographic low-level-of-living area (Hoffman and Lippitt, 1960; Moles, 1965).

Chilman (1966b, p. 6), in suggesting that we think about the "sub-cultures of poverty" wrote:

This is because research on other aspects of varying cultures and common observations in working with low-income people from various background would strongly suggest that within the sub-cultures of poverty, there is a wide variety of differing relationship patterns associated with race, religion, region of the country, national background, rural-urban locale, exact social class level, age and sex.

Besner (1966, p. 15) was concerned with economic deprivation and family patterns in the United States. He concluded that

. . . economic deprivation is associated with relatively more frequent occurrence of some family types and with characteristic differences in the internal functioning of the classic two-parent nuclear family.

While Irelan and Besner (1966, p. 9) viewed the lower income population as "insecure and comparatively powerless in relation to the rest of American society," they did not feel sufficient knowledge was available from which to draw conclusions about program implications. They did, however, suggest the following precautions:

1. The entire life situation of the poor must be considered if any part of it is to be changed. Their attitudes arise in no vacuum but are logical results of real circumstances.
2. Lower class citizens must be brought off the periphery into the structure of the community. Nothing which the community does for them can be durably effective until they are a functioning part of the community.
3. Energetic patience must prevail. The alienated adult cannot be completely re-educated. His children can be somewhat swayed. But it is with his grandchildren that one can really have hope.

Chilman (1965) summarized some studies that focused on child-rearing and family relationship patterns of the poor. A comparison was made between the findings of these studies with some studies concerned with "ideal" patterns of child-rearing and family life. From this body of information Chilman identified implications for service-type programs as well as for future research in this area. In relation to research implications, she pointed out:

At the descriptive level, it is clear that more precise and rigorous studies are required in order to obtain more exact

information about the various ethnic, regional, racial, and religious subcultures of poverty (Chilman, 1965, p. 16).

The question has remained, however, whether new insights gleaned from such experiences will lead ultimately to more effective programs.

Measuring Parental Attitudes

One of the important variables in family life is parent attitude. There has been continued interest since the 1930's in the relationship of parental attitudes to child behavior. This interest on the part of researchers has been based on the premise that such measurements of parental attitudes give important insights into the existing parent-child relationship (Baldwin, Kalhorn and Breese, 1945; Hoffman and Lippitt, 1960; Zunic, 1962).

To date, however, the validity of such a cause and effect relationship has not been established by empirical studies (Bell, 1958; Hoffman and Lippitt, 1960).

Perhaps one of the most frequent problems with existing research is the size of the 'causal jump' in the sequential framework. Too broad a jump, without operationalizing the intervening steps, makes it difficult to infer whether any particular finding may be regarded as evidence for one or another linking process (Hoffman and Lippitt, 1960, p. 947).

Nevertheless, extensive efforts to validate attitude instruments have continued because of the hypothesized relationship between parental attitudes and the social and cognitive development of the child.

Early studies employing attitude instruments were interested in linking family life variables to child behavior variables. Koch, Dentler, Dysart and Streit (1934) used the Thurstone technique to develop two scales to measure parents' attitudes toward various aspects

of child behavior by using a 10-point rating scale. Champney (1939) constructed the Fels Parent-Behavior Rating Scales, and Shoben (1949) drew on the Champney scales to develop the University of Southern California Parent Attitude Survey, PAS, for use by home visitors. The PAS was devised as a "self-inventory type scale designed to assess parent attitudes (as indicators of parent behavior) in relation to behavior and/or personality problems in children (Shoben, 1949, p. 117)."

Some evidence has been presented that such instruments can in some measure predict aspects of child behavior even though there are skeptics. Becker and Krug (1964a, p. 1) reported:

The establishment of such predictive power is, of course, only a first step implying some connection between assessed attitudes and behavior of parents and the behavior of children. The direction of effect is not demonstrated, nor are the intervening processes.

However, the first stage of attempting to validate a reliable instrument to determine parental attitudes, beliefs, and feelings is a necessary beginning.

The early interest of researchers in the measurement of parental attitudes and behavior was prompted in large measure by the need of clinical workers to make reasonably accurate inferences about the influence of the home environment on the child's maladjustment.

In recent years another potential use of parent attitude instruments related to the need of parent educators to structure parent involvement in education programs has come to the forefront. In efforts to influence the behavior of individuals, assumptions are made about the causes of such behavior. In parent intervention programs, one of these assumptions is that there are rational aspects of the parents'

role performance which can be influenced through educational efforts.

Brim (1959, p. 53) has argued, however, that:

There are many segments of human behavior which are not the simple expression of goal seeking in which the individual consciously selects the best means at his disposal and exercises such means. There are other determinants of human behavior which limit his rational autonomy in role performance, and, hence, which place limits on the possible achievements of education in increasing the parent's rationality.

He has listed these "other determinants of human behavior" as ability factors, unconscious factors, cultural values, interpersonal and social controls, group structural determinants, and ecological or physical aspects of the environment (Brim, 1959, p. 54). Each of these determinants influences in some way what the parent's attitudes are toward child-rearing practices whether he is conscious of them or not. If an attitude instrument can describe a parent's attitude in selected areas of child-rearing and/or family life so that the attitude can be made known to the parent educator and to the parent, then a sound starting place for discussion and program content has been found. Also the measurement of parental attitudes offers definite possibilities in considering objectively the effect of various techniques used in parent education.

It is sincerely to be hoped that more bold and creative experimentation with classes of content can be undertaken by parent education programs in the years ahead, and that evaluation research to provide a scientific basis for the selection of content undergoes significant development (Brim, 1959, p. 178).

Attitude scales, in comparison with other methods of studying variables, have the main advantage of ease of administering. In addition, their quantitative scoring makes statistical comparisons possible.

The best known and most widely used scale for measuring parental attitudes is the Parental Attitude Research Instrument developed by Schaefer and Bell (1958).

The Parental Attitude Research Instrument

The Parental Attitude Research Instrument, PARI, was developed during the 1950's by Schaefer and Bell at the National Institute of Mental Health. Schaefer and Bell saw the need for a conceptual analysis of the domain of parental attitudes toward child-rearing and the family. Their interest was in the development of a set of homogeneous measures of parental attitudes which would provide a research instrument for future studies (Schaefer and Bell, 1958). More specifically, the intent was to develop "measures of specific attitude concepts composed of homogeneous groups of items" since "such an inventory would be more useful than a test composed of individual items or one which would give only one score of pathogenicity of parental attitude (Schaefer and Bell, 1958, p. 344)." A conceptual analysis of the domain of parental attitudes was made as a basis for developing measure of attitudes. Initially, thirty-two attitude concepts were formulated on the basis of theory and from studies by Mark (1953) and Shoben (1949). Three techniques were used in wording items that might be considered sensitive areas by the respondent: use of vague terms; "use of cliches colloquialisms, and conventional affect-laden phrases"; and "attaching the auro of self-righteousness" to an item (Schaefer and Bell, 1958, p. 348).

In the PARI, a Likert-type attitude scale, the respondents were asked to indicate whether they strongly agree, mildly agree, mildly

disagree, or strongly disagree with each item. Scores for each sub-scale were computed by assigning weights to the four response categories.

Three trial forms of the instrument were given to sample respondents and a fourth final form was used by Schaefer and Bell to determine the reliability of the five item sub-scales. Preliminary sub-scales were tried out with small samples of mothers, and items were eliminated if they did not reveal variation in attitude or did not covary with the other items used to define the sub-scale. In its final form the PARI consisted of 23 five-item sub-scales, measuring such attitude concepts as encouraging verbalization, fostering dependency, suppression of aggression, rejection of homemaking role, and acceleration of development.

There have been at least three attempts to examine the structure of the PARI sub-scales through factor analysis (Schaefer and Bell, 1957; Zuckerman, Ribback, Monashkin, and Norton, 1958; Schaefer, 1961). The first analysis was with Trial Form III and a sample of 100 unmarried student nurses in their freshman and sophomore years. This was described as a homogeneous sample due to their education, age, and socio-economic background. Internal consistency reliability coefficients were calculated for each of the sub-scales (using the Kuder-Richardson Formula 20) and were in the range of .54 to .84 (Schaefer and Bell, 1957). Even though the reliabilities were relatively low they were considered adequate for a factor analysis.

An oblique simple structure rotation revealed five relatively independent factors, identified as Suppression

and Interpersonal Distance, Hostile Rejection of the Home-making Role, Excessive Demand for Striving, Over-possessiveness and Hostile Punitive Control (Schaefer and Bell, 1957, p. 395).

Zuckerman, Ribback, Monashkin and Norton (1958) subsequently factor analyzed the PARI. The heterogeneous sample included 222 normative mothers, 131 mothers of psychiatric patients and disturbed children, and 60 mothers who were psychiatric patients. A total of 413 respondents were used for the factor analysis using the principal axis solution. Zuckerman, Ribback, Monashkin and Norton (1958) extracted three factors which were similar to those found by Schaefer (1961): factor A, authoritarian-control; factor B, hostility-rejection; and factor C, democratic attitudes.

The third factor analysis was made by Schaefer (1961) on the basis of Final Form IV administered to a sample of 100 multi-parae mothers tested in a military hospital following delivery of their babies. The internal consistency reliability coefficients for this sample (using the Kuder-Richardson Formula 20) were between .40 and .77 (Schaefer, 1961). Factor analysis of these data revealed three factors. Factor I: approval of maternal control of the child, included 16 of the 23 sub-scales and was seen as an authoritarian-controlling factor; factor II: approval of expression of hostility, included four sub-scales and was seen as a hostility-rejection factor; factor III: approval of positive attitudes toward child-rearing, included four sub-scales and was labeled a democratic-equalitarian factor (Schaefer, 1961). From these three factor analyses, three major factors may be identified:

<u>Factors</u>	<u>Schaefer & Bell</u>	<u>Zuckerman et al.</u>
1st factor	"approval of maternal control of the child"	"authoritarian control"
2nd factor	"approval of maternal expression of hostility"	"hostility-rejection"
3rd factor	"approval of positive attitudes toward child rearing"	"democratic attitudes"

The third factor, involved primarily the sub-scales having to do with rapport, has usually been discarded in subsequent research with the PARI (Becker and Krug, 1965).

The major criticism leveled at the PARI (Becker and Krug, 1965) has been focused on the influence of response sets and the overriding influence of education on the scores. It has been recognized by Bell and Schaefer (1959), Bell (1962), Zuckerman and Norton (1961) and by Zuckerman, Norton, and Sprague (1958) that the instrument is influenced by acquiescence and extreme response sets.

The present study acknowledged that the response sets may be a limitation to the use of the PARI. However, the use of the PARI in the present research appeared to be the best available instrument to identify parental attitudes as a starting place for initiating dialogue for parent education/intervention programs. Moreover, it was felt that response sets would not be an overriding factor with the rural, unsophisticated sample studied. The thorough review of PARI research findings made by Becker and Krug (1965) has pointed to agreement with Bell and Schaefer on the usefulness of the PARI as a first stage instrument to be used:

. . . as a preliminary survey instrument in a new area
(or in a prediction situation where a large number of

decisions are being made and many different sources of variance are needed for different predictions) (Bell and Schaefer, 1959, p. 1).

CHAPTER III

PROCEDURES OF THE INVESTIGATION

The major purpose of the study was to assess the attitudes of mothers in a low-level-of-living area toward child-rearing and family life practices using the Parental Attitude Research Instrument, PARI.

Procedural steps in this study were: (a) selection of subjects; (b) pretest of proposed procedures and the instrument; (c) interviewing and collection of data; and (d) data analysis.

Subjects

The population for this study was selected on the basis of information available from the 1960 United States Census. The researcher wanted information from mothers of first grade children in rural, low-level-of-living areas. The geographic area comprising the four counties of Watauga, Avery, Mitchell, and Yancy in northwest North Carolina was selected for three main reasons. First, the counties are seen in some respects as a total geographical area because of the mountainous terrain and contiguous location of the counties. This is evidenced by the fact that the Office of Economic Opportunity sponsors a WAMY Community-Action Program to serve the four-county area. It is characterized as a rural area, with the town of Boone and Spruce Pine the largest population centers in the four-county area having populations of 3686 and 2504, respectively. Second, it is characterized as a low-level-of-living area economically. The 1960 Census reported the median family income in 1959 to be: Avery, \$2,569; Mitchell, \$2,779; Watauga,

\$2,497; Yancy, \$2,445. This is in comparison to a median family income of \$5660 for the United States. Third, approximately one-quarter of the families living in the four-county area had one or more children under six years of age. (See Table 1.)

Table 1

Families in Four North Carolina Counties
Having Children Under Six Years of Age

County	Percent of families with children under six years of age	Percent of incomes under \$3000
Avery	23.4	57.9
Mitchell	28.5	53.8
Watauga	27.1	59.7
Yancy	28.9	60.3

After designating the area, a list of all elementary schools in each of the four counties was compiled and one elementary school with an alternate was chosen at random from each county. The county school superintendents of the four counties selected were personally interviewed by the researcher to inform them of the research planned and to obtain their permission for the study to be conducted through their school systems. Conferences were then held with each of the four school principals.

Information concerning each first grade child's name, age, address, and parents' names was secured from teachers' records, and from talking with teachers, principals, and Cooperative Extension agents in the area.

The decision was made to include as subjects only mothers who were living with their husbands (i.e., intact families) and/or those grandmothers who had the total responsibility for rearing the child because of the mother's absence from the home. If it was known that the husband had been absent from the home for an extended time due to any circumstances for six months prior to the interview, then that mother was not contacted or, if interviewed, the questionnaire was not used. It was felt that the attitudes of these mothers might be influenced by the husband's absence and thus be reflected in the interview.

One hundred eighteen subjects (mothers) to be contacted were assigned to the two interviewers.¹ Of those 118 subjects, 101 completed interviews were obtained and are reported in this study. The respondent was in all but three cases the mother of the first grade child. The "father" referred to on the "parent information" sheets refers to the father of the first grade child.

General descriptive information, Parent Information Sheet, (see Appendix A) was collected on each respondent during the interview in addition to her responses to the PARI. The first two pages of the questionnaire contained questions about the respondent and the family: age of respondent, father, children; respondent's and father's educational attainment; the employment status of the father including his present occupation. The respondent was also asked to indicate whether she was presently gainfully employed and whether she had been to a meeting or class where children and families were discussed. A question on

¹See Section on interviewers beginning on page 34.

family income was also included.

The age range of the respondents was between 20 and 64 years of age. About seventy per cent of the respondents were 34 years of age or younger. The age range for the fathers was between 20 and 59 years of age with over 75 per cent of the fathers being 39 years of age or younger. The fathers tended to be a few years older than the respondents. Ages of respondents and of fathers of first grade children are shown in Table 2.

Table 2
Ages of Respondents and of Fathers of
First Grade Children

Age	No. of Respondents N = 101	No. of Fathers N = 99
20 to 24 years	11	1
25 to 29 years	28	18
30 to 34 years	30	34
35 to 39 years	14	24
40 to 44 years	13	13
45 to 49 years	3	5
50 to 54 years	1	3
55 to 59 years	0	1
60 to 64 years	1	0

The total number of children in the 101 families was 254. Eighty-seven of these children were 5 years of age or under so were not enrolled in school. There were 45 children who were 16 years of

age and older. One hundred twenty-one of the 254 children were between the ages of 6 and 15. Therefore, almost one-half of the 254 children were of school age. These data are shown in Table 3.

Table 3

Number and Ages of Children
in Families Interviewed

Age Groups	No. of Children N = 254
Infant (under 15 mos.)	13
Toddler (16 mos. to 2 years)	19
Preschooler (3 to 5 years)	55
Primary years (6 to 8 years)	32
Preadolescent (9 to 12 years)	64
Early adolescent (13 to 15 years)	25
Later adolescent (16 to 18 years)	24
Young adult (19 to 21 years)	9
Adult (21 years and older)	12
NR - child not living with family	1

The number of children in the families studied ranged from one to ten. Fourteen families had one child: the first grade child. Fifty families had two or three children and 36 families had four or more children.

Respondents were asked the number of years of schooling completed, both by themselves and by the father. Thirty-four of the respondents reported having 8 years or less of schooling. Forty-six of the fathers had an eighth grade education or less. This means that approximately one-third of the respondents (and almost one-half of the fathers) could be classified by adult basic educators as non-readers: those having less than an eighth grade education. Thirty-two respondents reported having completed 9 to 11 years of school and 26 reported having completed high school. Twenty-three fathers had completed 9 to 11 years of school, and 22 were reported as having finished high school. In terms of education beyond high school, four respondents had technical or vocational school training, and five finished college. Of the fathers, three had some technical, vocational schooling, or some college, and five had completed college and engaged in some graduate study. These data are shown in Table 4.

Table 4
Educational Attainment of Respondents and Fathers

Highest Grade Completed	No. of Respondents N = 101	No. of Fathers N = 99
0 to 5 years	10	17
6 to 8 years	24	29
9 to 11 years	32	23
Completed high school	26	22
Technical or vocational school	4	1
Some college	0	2
Completed college	5	3
Graduate study	0	2

The large majority of the fathers, 85 out of 101, were employed full time at the time of the study. Only 9 were employed part-time or occasionally and 7 were unemployed.

The U. S. Census categories were used to classify the principal occupations of the fathers. Thirty-one of the fathers were classified as craftsmen and foremen, 28 were operatives. Fourteen of the fathers were engaged in farming as their major occupation. Seven of the fathers had professional and technical occupations. The remaining 12 fathers were managers, clerks, sales workers, service workers, or laborers. Eighteen of the 92 fathers were reported to hold a second job. Data on fathers' occupations are shown in Table 5.

Table 5

Principal Occupation of Fathers

Classification	Number N = 92
Professional, technical and kindred workers	7
Farmers and farm managers (except farm laborers)	14
Managers, officials and proprietors	4
Clerical and kindred workers	1
Sales workers	3
Craftsmen, foremen and kindred workers	31
Operatives and kindred workers	28
Private household workers	0
Service workers	1
Farm laborers and foremen	0
Laborers (except farm and mine)	3

Since the sample of respondents was seen as representative of a low-level-of-living area, a general attempt was made to gather information on family income. Respondents were asked to indicate a range of income that approximated the family's total spendable income, from all sources, for the year 1965. The interviewers reported that there was reluctance in several cases to give consideration to this question. In other instances the interviewers reported that the respondent replied that she really didn't know and could only guess. Table 6 shows the income reported by 99 of the respondents. The mean income for the sample fell in the range \$4000 and \$4999, and the median income was between \$4000 and \$4999.

Table 6

Reported Total Spendable Family Income for 1965

Income Range	No. of Families N = 99
under \$1,000	7
\$1,000. to \$1,999.	9
\$2,000. to \$2,999.	10
\$3,000. to \$3,999.	22
\$4,000. to \$4,999.	15
\$5,000. to \$5,999.	16
\$6,000. to \$6,999.	4
\$7,000. to \$7,999.	5
\$8,000. to \$8,999.	3
\$9,000. to \$9,999.	1
\$10,000. to \$10,999.	7

Approximately one-third of the 101 respondents were gainfully employed outside of the home. Of the 37 employed, 15 reported participation during the last three years in a class or meeting where the group talked about children and the family. Of the 64 not employed outside the home, 24 indicated that they had been to such a group meeting; 40 had not attended such a meeting. Thus, only one-third of the 101 respondents had participated in a group where the discussion included topics on children and family life. The respondents were asked to describe the activity in which they had participated, as an indication of the sponsorship of the program. An analysis of results showed that programs sponsored by the public schools reached the largest number. (See Table 7.)

Table 7

Respondents Who Reported Attending a Meeting or Class
Where Children and the Family Were Discussed

Program Sponsorship	Number N = 38
Public Schools	22
Extension Service	3
Church	1
Mental Health	1
Public Health	1
Social Welfare	1
Office of Economic Opportunity	1
Both Public School and O.E.O.	7
Both Social Welfare and Public School	1

Pilot Study

A pilot study was conducted in Greensboro, North Carolina, with ten low-level-of-living mothers. The pretest subjects lived in a federal housing project in southeast Greensboro and had a preschool child enrolled in a local Head Start program during the Fall of 1966. The researcher had the assistance of the Head Start director and staff in obtaining the cooperation of the subjects. The subjects were contacted initially through a letter from the researcher, then visited individually in their homes during a two-week period in October 1966. The form of the PARI used is included in Appendix B. The purposes of the pretest were:

- a. to determine whether the respondents had any difficulty with the words used in the questionnaire items
- b. to note the subject's reaction toward responding to a questionnaire on child rearing and family life
- c. to observe the test-taking process so as to construct an effective interviewing situation.

During the home interview, the researcher explained the study and asked whether the subject would assist by filling out the questionnaire and would then talk about it. The researcher made the following observations as a result of the ten pretest interviews:

- a. The Head Start staff, by discussing the study informally, legitimized and thus encouraged the subjects' participation.
- b. At some point in the home interview each subject commented favorably on having received a letter from the researcher.
- c. After five to ten minutes of general conversation (usually about the children playing nearby) the researcher asked the subject if she would like to complete the questionnaire by herself or whether they might do it together. In seven instances the subject

suggested that the researcher read the items to her. In three interviews, the subject filled it out alone while the researcher developed an activity with the children. The subject was handed a blank form of the questionnaire to follow when the researcher filled out the form with her.

- d. The total time for the home interviews varied from one hour to two and one-half hours. The median time to go through the 204-item questionnaire was one and one-half hours.
- e. Just prior to starting the questionnaire, the researcher instructed the subject to indicate any words that should be changed because she (respondent) wasn't sure of their meaning and to mark words that she thought other mothers might not understand. These were circled on the questionnaire by the subject or the researcher. On the basis of the pretest and subsequent suggestions made by the two interviewers, additional words were put in parenthesis in items #34, #49, #80, and #87 in an attempt to clarify the meaning of the statements.
- f. It was the researcher's general opinion that the respondents were most interested in the welfare of their children and not at all reluctant to express their feelings or to ask for ideas from the researcher.
- g. It was helpful to the researcher to participate in the various interview situations in the homes. As the result of this experience, some general procedures were worked out and discussed with the interviewers to help them structure the home interview.

Interviewers

Two homemakers living in the area were employed¹ to carry out the interviewing of the mothers in their homes. The interviewers were located through the cooperation of the Home Economics Extension Agents in Avery and Mitchell Counties. The interviewers were selected on the

¹Funds provided by the North Carolina Agricultural Extension Service made it possible to employ two interviewers for the study. Grateful acknowledgement is made to Dr. Eloise Cofer for her interest and efforts in obtaining this financial assistance.

basis of (a) being persons who could make "contact" with a respondent quickly and whose experience would be accepted by mothers of first grade children; (b) having an appropriate appearance and manner; (c) displaying tact and discretion, and (d) being able to understand and accept the importance of the study and the importance of not influencing the respondent in filling out the questionnaire. The fact that the interviewers were themselves wives, mothers, and homemakers of about the same age as the mothers to be interviewed meant that they would be accepted in most instances by the respondents as someone whose interests were similar to their own.

The interviewers attended two one- and one-half day training sessions given by the researcher prior to beginning the actual interviewing for the study. Regular telephone contacts were arranged to answer questions the interviewers had between two follow-up conferences. The training included for each interviewer a practice interview with a respondent not in the study sample. This session was followed by a self-appraisal and discussion of standard interviewing procedures with the two interviewers. Such procedures included the decision to make three home contacts over a period of two weeks before designating the subject as a "couldn't contact." It was recognized that the many activities taking place in a home at the time of the interview might make it difficult to have the respondent's attention. The following guidelines were set up to minimize distracting situations:

- a. After introducing herself to the subject and explaining the nature of the call and the purpose of the study, the interviewer would ask the homemaker if she had a two-hour period free to work with her. In only

four cases did the interviewers find it necessary to return at a later date to complete the interview.

- b. If the husband or persons other than younger children were at home, the interviewer made the suggestion that the subject and she work at the kitchen table or in some other room where they would not be disturbing others.
- c. The interviewers found it helpful to have pencils and paper in their supplies along with penny candy to share with the younger children during the interview. In one instance the interviewer offered to do the ironing while the respondent filled out the questionnaire.
- d. The interviewer first filled in the two "parent information" sheets. If the respondent had completed high school, she was asked if she would like to complete the questionnaire by herself.

Each interviewer's impression of the interview was recorded for later analysis. An Interview Evaluation Form, IEF, was devised by the researcher and filled in by the interviewer following the home visit. (See Appendix C.)

Collection of Data

The interviewing for the study, including 30 retest interviews, was carried out in the period between December 1966 and mid-April 1967. Ten informal follow-up interviews were held in June by the researcher. Each interviewer was assigned a two-county area for initial contacts and interviews. One interviewer covered the Mitchell - Yancy subjects and the other the Avery - Watauga subjects. Before any interviewing began, a letter from the school principal was sent home with all first grade children to alert the parents to the proposed study and a possible visit by an interviewer. It asked for their cooperation. The cooperation of parents was, in general, excellent. From the 118

respondents assigned to the interviewers, 101 usable questionnaires resulted. (There were two refusals; six questionnaires were not used because they were incomplete or because the interviewer stated that the respondents did not apparently comprehend the task; and nine subjects could not be contacted in three or more attempts.)

The interviews averaged three and one-half hours. This included travel time to and from the respondent's home. In many cases the interviewers had difficulty locating the subject's home because of the inadequacy of the existing address and the mountainous terrain. Using detailed county highway maps, or following the school bus, or asking at the local grocery store were found to be the most effective ways of locating homes. Road conditions were a limiting factor in traveling during the winter and spring months. Some respondents lived a mile or more away from any secondary road and their homes were accessible only by jeep or by walking the remaining distance to the home. Over 480 hours were spent in interviewing, including travel time.

Retest interviews were held with 30 of the original 101 respondents. The retest cases were selected at random from the total number of cases included in the study. The retest respondents were interviewed within four to six weeks following the first interview. The interviewer who conducted the retest interview was not one who had first interviewed the respondent.

The follow-up interviews were held with 10 of the respondents in June of 1967. These were rather informal sessions with the researcher, to provide her an opportunity to discuss designated sub-scales with respondents. The purpose of the follow-up interviews was to discover

whether respondents would change their attitudes as indicated by their initial PARI score if they had a chance to consider all the items together that made up a given sub-scale and could discuss these with the interviewer/researcher.

A list of respondents who had scored three or more of the sub-scales at an extreme (i.e., had marked all the items "strongly agree" or "strongly disagree") was compiled. A copy of the statements for each of the relevant sub-scales was given to the respondent and she was asked to score them using the original four-point scale. The respondent was not told at the beginning of the interview how she had originally scored either the individual items or the total sub-scale. In the 10 interviews, a total of 42 sub-scales were reviewed. In only four instances, involving four different sub-scales and different respondents, did the subjects' responses differ at this interview from their original responses on the scales.

CHAPTER IV

ANALYSIS OF DATA

One objective of this study was to judge the validity of the Parental Attitude Research Instrument, PARI, with the particular population sampled, a low-level-of-living population. The PARI had been validated with middle-class socio-economic populations. Moreover, it should be recalled that the population for this study was composed of mothers of first grade children living in four rural counties in North Carolina, part of the geographic region of the United States designated as Appalachia.

The validation procedure used in the present study is known as construct validity. Cronbach and Meehl (1955, p. 282) state:

Construct validation is involved whenever a test is to be interpreted as a measure of some attribute or quality, which is not 'operationally defined' . . . Construct validity must be investigated whenever no criterion or universe of content is accepted as entirely adequate to define the quality to be measured.

Appendix B contains the form of the PARI administered to the sample of Appalachian mothers. It was composed of 23 scales made up of eight to ten items. These 23 attitude scales are subsequently referred to as sub-scales. The sub-scales were given titles so that the 23 concepts could be distinguished from one another. It is the verification of these distinctions between the concepts that is the important part of the validation process (Campbell and Fiske, 1959). The following investigative procedures identified by Macfarlane (1942) and later suggested by Cronbach and Meehl (1955) were used in

ascertaining the construct validity of the study:

- a. determination of group differences
- b. studies of change over occasions
- c. study of internal structures
- d. observations of the test-taking process
- e. correlation matrices and factor analysis

Group Differences

The understanding of a construct or concept, and what has been observed and actually experienced by working with different groups of people (e.g., in parent intervention programs) could lead the investigator to expect two groups to differ on a given test or on parts of a test that measure a different concept. Cronbach and Meehl (1955, p. 287) state that this expectation can be tested directly although "only coarse correspondence between test and group designation is expected." The group differences investigated in this study were the mean scores of three groupings of respondents within the chosen variables of: (a) age; (b) education; (c) occupation (of father); and (d) family size.

Single analysis of variance was employed to test the following hypotheses:

- I. There are differences related to age of respondents in mean scores of three groups.
- II. There are differences related to education of respondents in mean scores of three groups.
- III. There are differences related to fathers' occupations in mean scores of three groups.

IV. There are differences related to the number of children in the family in mean scores of three groups.

Age of Respondent

The mean scores by age, across the 26 modified sub-scales, differed enough to produce significant F values at the .025 level on only one of the sub-scales. (See Table 8.) The mean scores produced significant F values at the .05 level on three additional sub-scales. Four sub-scales had significant F values at the .10 level. Respondents between the ages of 30 and 34 (Group 3) had low mean scores on these 8 sub-scales. It would seem that respondents in their early 30's were less likely to support the following concepts:

5. Supremacy of Adult
7. Fear of Harming the Baby
14. Rejection of Homemaking Role
18. Avoidance of Communication
19. Inconsiderateness of Husband
21. Ascendancy of the Mother
23. Comradeship and Sharing
26. Dependency of the Mother

Group 2 included respondents who were 35 years of age and older. This group had high mean scores for the 8 sub-scales listed above. Therefore, Group 2 respondents were more likely to support the concepts listed above.

Table 8
Age of Respondent
F Values¹ and Group Mean Scores

Title of Sub-scale	F Value	Group 1 N = 39	Group 2 N = 32	Group 3 N = 30
1. Encouraging Verbalization	<1	21.3	20.8	21.6
2. Fostering Dependency	1.3	12.4	12.1	10.8
3. Seclusion of the Mother	2.2	16.9	17.0	14.9
4. Breaking the Will	1.7	11.5	11.8	10.6
5. Supremacy of Adult	3.6*	10.9	12.4	11.0
6. Martyrdom	1.5	18.8	20.2	17.1
7. Fear of Harming the Baby	3.2*	11.4	11.0	9.7
8. Strictness	2.0	18.6	18.8	17.0
9. Irritability	1.5	13.8	13.7	12.2
10. Excluding Outside Influences	1.5	13.6	13.9	12.3
11. Deification	1.0	16.5	15.3	15.7
12. Loyalty to Parents	2.3	12.8	12.7	11.4
13. Suppression of Aggression	2.3	13.6	14.8	12.4
14. Rejection of Homemaking Role	2.6+	9.9	10.7	9.0
15. Feeling of Being Tied Down	<1	7.9	8.9	8.1
16. Approval of Activity	2.0	12.2	13.3	12.2
17. Value Activity	<1	11.8	12.0	11.5
18. Avoidance of Communication	2.6+	16.6	17.1	14.6
19. Inconsiderateness of Husband	7.0#	17.8	17.7	14.0
20. Suppression of Sex	1.0	16.4	16.5	14.5
21. Ascendancy of the Mother	2.6+	16.0	17.5	14.6
22. Intrusiveness	1.2	17.2	17.5	15.8
23. Comradeship and Sharing	2.6+	17.7	18.3	17.2
24. Acceleration of Development	1.9	16.4	15.6	14.6
25. Encourage Independence	1.9	11.7	12.9	12.0
26. Dependency of the Mother	3.6*	11.6	11.7	9.9

¹The tabulated F value was 2.36 at .10 level of significance with 2 and 100 degrees of freedom; 3.09 at .05 level of significance; and 3.83 at .025 level of significance

= The calculated V value greater than tabulated F value at .025 level.

* = The calculated F value greater than tabulated F value at .05 level.

+ = The calculated F value greater than tabulated F value at .10 level.

Respondents in Group 1 were those mothers under 29 years of age. This group scored lower than Group 2, but generally higher than Group 3 on sub-scales: #14, Rejection of Homemaking Role; #18, Avoidance of Communication; #21, Ascendancy of Mother; and #23, Comradeship and Sharing. It would seem, however, that respondents under 29 years of age are more likely to support the concepts: #7, Fear of Harming the Baby; and #19, Inconsiderateness of Husband.

Hypothesis I was accepted because there were differences related to age of respondents in the mean scores of three groups.

Education of Respondent

The mean scores by education, across the modified sub-scales, showed significant F values at the .025 level on 18 of the 26 sub-scales. (See Table 9.) In addition, the mean scores produced significant F values at the .10 level on two additional sub-scales. Respondents who had completed high school (Group 3) had the lowest mean scores on the following sub-scales:

2. Fostering Dependency
3. Seclusion of the Mother
4. Breaking the Will
5. Supremacy of Adult
6. Martyrdom
7. Fear of Harming the Baby
8. Strictness
9. Irritability
10. Excluding Outside Influences
11. Deification

13. Suppression of Aggression
15. Feeling of Being Tied Down
18. Avoidance of Communication
19. Inconsiderateness of Husband
20. Suppression of Sex
21. Ascendancy of the Mother
22. Intrusiveness
24. Acceleration of Development
25. Encourage Independence
26. Dependency of the Mother

In other words, mothers who were high school graduates did not in general support these 20 concepts of child rearing and family life.

Group 1 was made up of mothers who had eight years or less of schooling. Those mothers had the highest mean scores for the 20 sub-scales and it can be surmised that they would lend support to the concepts listed above.

Respondents in Group 2 were those who had completed from 9 to 11 years of schooling. They scored the 20 sub-scales higher than Group 3, but lower than Group 1. Thus, this group on "middle ground," educationally speaking, tended to show "middle ground" attitudes toward the 20 concepts of child rearing and family life.

Hypothesis II was accepted because there were differences related to education of respondents in the mean scores of three groups.

Table 9
Education of Respondent
F Values¹ and Group Mean Scores

Title of Sub-scale	F Value	Group 1 N = 34	Group 2 N = 32	Group 3 N = 35
1. Encouraging Verbalization	2.3	22.0	20.3	20.5
2. Fostering Dependency	6.8#	13.5	12.1	9.9
3. Seclusion of the Mother	17.8#	18.9	16.7	13.4
4. Breaking the Will	5.5#	12.4	11.5	10.3
5. Supremacy of Adult	8.4#	12.9	11.1	10.5
6. Martyrdom	13.8#	22.6	18.9	14.9
7. Fear of Harming the Baby	7.2#	12.0	10.8	9.6
8. Strictness	4.1#	19.2	18.5	16.6
9. Irritability	9.2#	14.8	14.2	11.1
10. Excluding Outside Influences	5.6#	14.9	13.8	12.1
11. Deification	5.1#	16.8	16.6	14.3
12. Loyalty to Parents	2.1	12.9	12.6	11.6
13. Suppression of Aggression	2.7+	14.5	14.1	12.3
14. Rejection of Homemaking Role	<1	10.7	10.2	9.6
15. Feeling of Being Tied Down	4.4#	9.4	8.5	7.1
16. Approval of Activity	<1	12.5	12.7	12.5
17. Value Activity	2.2	12.4	11.3	11.4
18. Avoidance of Communication	5.1#	17.6	16.5	14.2
19. Inconsiderateness of Husband	19.1#	18.9	17.9	13.1
20. Suppression of Sex	9.4#	18.8	16.0	12.9
21. Ascendancy of the Mother	9.0#	18.4	16.4	13.7
22. Intrusiveness	5.7#	18.6	17.1	14.9
23. Comradeship and Sharing	1.8	17.9	17.9	16.8
24. Acceleration of Development	6.9#	16.8	16.3	13.7
25. Encourage Independence	2.6+	13.0	11.9	11.6
26. Dependency of the Mother	11.7#	12.3	11.9	9.3

¹The tabulated F value was 2.36 at .10 level of significance with 2 and 100 degrees of freedom; 3.09 at .05 level of significance; and 3.83 at .025 level of significance.

= The calculated F value greater than tabulated F value at .025 level.

* = The calculated F value greater than tabulated F value at .05 level.

+ = The calculated F value greater than tabulated F value at .10 level.

Principal Occupation of Father

Mean scores, across the modified sub-scales by occupation of the father, showed F values to be significant at the .025 level on 6 of the 26 sub-scales. (See Table 10.) In addition, the mean scores produced significant F values at the .05 level on one sub-scale and at the .10 level on 4 sub-scales. Group 1 included respondents where the father was a white collar worker¹ or a farmer who was known to be a manager of the farm operation. Group 1 had the lowest mean scores on 10 of the 11 sub-scales where F values showed significant differences in mean scores. Therefore, respondents whose husbands were in white collar or farmer-manager occupations were less likely to agree with the concepts measured by the following sub-scales:

2. Fostering Dependency
4. Breaking the Will
5. Supremacy of Adult
6. Martyrdom
7. Fear of Harming the Baby
10. Excluding Outside Influences
12. Loyalty to Parents
13. Suppression of Aggression
19. Inconsiderateness of Husband
22. Intrusiveness

¹White collar workers included the census categories of: professional, technical, and kindred workers; managers, officials, and proprietors; clerical and kindred; and sales workers.

Table 10
Principal Occupation of the Father
F Values¹ and Group Mean Scores

Title of Sub-scale	F Value	Group 1 N = 22	Group 2 N = 32	Group 3 N = 32
1. Encouraging Verbalization	<1	21.4	20.9	21.8
2. Fostering Dependency	3.9#	9.7	12.9	11.5
3. Seclusion of the Mother	1.9	14.9	17.1	15.4
4. Breaking the Will	4.5#	9.7	11.4	11.8
5. Supremacy of Adult	5.8#	9.7	11.6	12.2
6. Martyrdom	2.5+	16.1	20.4	18.7
7. Fear of Harming the Baby	3.9#	9.6	11.7	10.5
8. Strictness	2.2	16.7	18.8	18.3
9. Irritability	1.5	11.9	13.8	13.4
10. Excluding Outside Influences	3.8#	11.5	14.2	13.0
11. Deification	<1	15.1	16.2	15.4
12. Loyalty to Parents	2.6+	11.2	12.8	12.5
13. Suppression of Aggression	6.1#	11.5	15.4	13.6
14. Rejection of Homemaking Role	1.5	9.0	9.7	10.3
15. Feeling of Being Tied Down	<1	7.7	8.2	8.8
16. Approval of Activity	<1	12.6	12.1	13.0
17. Value Activity	1.6	11.2	11.4	12.3
18. Avoidance of Communication	<1	15.	16.4	16.6
19. Inconsiderateness of Husband	2.6+	14.6	17.0	17.3
20. Suppression of Sex	1.9	13.6	16.6	15.3
21. Ascendancy of the Mother	1.0	15.0	16.9	15.9
22. Intrusiveness	3.2*	14.4	17.5	17.2
23. Comradeship and Sharing	2.5+	18.0	17.0	18.0
24. Acceleration of Development	1.5	14.2	15.8	15.9
25. Encourage Independence	<1	12.2	12.0	12.0
26. Dependency of the Mother	1.7	10.1	11.6	11.1

¹The tabulated F value was 2.36 at .10 level of significance with 2 and 100 degrees of freedom; 3.09 at .05 level of significance; and 3.83 at .025 level of significance.

= The calculated F value greater than tabulated F value at .025 level.

* = The calculated F value greater than tabulated F value at .05 level.

+ = The calculated F value greater than tabulated F value at .10 level.

Group 1 scored high on sub-scale #23, Comradeship and Sharing (as did Group 3, the respondents where the fathers were craftsmen).

Group 2 included respondents whose husbands were operatives, service workers, and laborers. This group had high mean scores for 9 of the sub-scales where differences were found. Respondents in this group were more likely to endorse these concepts.

- 2. Fostering Dependency
- 4. Breaking the Will
- 6. Martyrdom
- 7. Fear of Harming the Baby
- 10. Excluding Outside Influences
- 12. Loyalty to Parents
- 13. Suppression of Aggression
- 19. Inconsiderateness of Husband
- 22. Intrusiveness

On only 4 sub-scales:

- 4. Breaking the Will
- 5. Supremacy of Adult
- 19. Inconsiderateness of Husband
- 23. Comradeship and Sharing

did either Group 3 or Group 1 have a somewhat higher mean score than Group 2.

Group 3 respondents tended to score the sub-scales higher than Group 1.

Hypothesis III was accepted because there were differences related to occupation of the father in the mean scores of three groups.

Number of Children in the Family

The mean scores, across modified sub-scales by number of children in the family, differed enough to produce significant F values at the .025 level on 13 of the 26 sub-scales. (See Table 11.) In addition, 3 of the 26 sub-scales had mean scores that differed enough to produce significant F values at the .05 level.

In Group 1 the respondents had only one child, the first grade child. Group 2 was made up of respondents who had four or more children. Group 3 included those respondents who had two or three children.

Respondents with only one child (a first grader) had low mean scores on the following 14 sub-scales, suggesting they were less likely to endorse the concepts.

3. Seclusion of the Mother
4. Breaking the Will
5. Supremacy of Adult
6. Martyrdom
8. Strictness
9. Irritability
10. Excluding Outside Influences
14. Rejection of Homemaking Role
15. Feeling of Being Tied Down
16. Approval of Activity
18. Avoidance of Communication
19. Inconsiderateness of Husband
21. Ascendancy of the Mother
26. Dependency of the Mother

Table 11
 Number of Children in the Family
 F Values¹ and Group Mean Scores

Title of Sub-scale	F ¹ Value	Group 1 N = 13	Group 2 N = 51	Group 3 N = 37
1. Encouraging Verbalization	4.1#	23.3	21.2	20.6
2. Fostering Dependency	1.1	10.8	11.6	12.6
3. Seclusion of the Mother	8.0#	12.5	16.1	17.8
4. Breaking the Will	3.2*	9.7	11.3	11.9
5. Supremacy of Adult	6.5#	9.2	11.4	12.2
6. Martyrdom	5.5#	14.4	18.1	21.1
7. Fear of Harming the Baby	<1	10.2	10.7	11.1
8. Strictness	8.6#	15.4	17.7	19.8
9. Irritability	9.1#	9.3	13.4	14.5
10. Excluding Outside Influences	3.3*	11.5	13.0	14.4
11. Deification	1.1	15.5	15.4	16.6
12. Loyalty to Parents	1.3	11.5	12.2	12.9
13. Suppression of Aggression	.5	12.3	12.8	15.3
14. Rejection of Homemaking Role	5.1#	7.5	10.1	10.4
15. Feeling of Being Tied Down	6.8#	5.7	8.1	9.4
16. Approval of Activity	8.9#	11.2	11.9	14.0
17. Value Activity	1.3	11.6	11.5	12.3
18. Avoidance of Communication	3.7*	14.1	15.6	17.6
19. Inconsiderateness of Husband	5.5#	13.	16.6	18.0
20. Suppression of Sex	2.0	13.4	15.6	17.1
21. Ascendancy of the Mother	9.1#	11.8	15.7	18.1
22. Intrusiveness	<1	16.8	16.3	17.6
23. Comradeship and Sharing	<1	17.2	17.8	17.9
24. Acceleration of Development	1.2	14.8	15.2	16.4
25. Encourage Independence	6.9#	11.9	11.4	13.4
26. Dependency of the Mother	6.4#	8.5	11.3	11.9

¹The tabulated F value was 2.36 at .10 level of significance with 2 and 100 degrees of freedom; 3.09 at .05 level of significance, and 3.83 at .025 level of significance with 2 and 100 degrees of freedom.

= The calculated F value greater than tabulated F value at .025 level.

* = The calculated F value greater than tabulated F value at .05 level.

+ = The calculated F value greater than tabulated F value at .10 level.

Respondents with only one child had high mean scores on sub-scale #1, Encouraging Verbalization, which suggests they were more likely to support this concept.

Respondents in Group 2, those having four or more children, had the lowest mean scores for the sub-scales:

1. Encouraging Verbalization

25. Encourage Independence

So it would seem that they were less likely to support these two concepts. Group 2 tended to show moderate attitudes toward the remaining 14 sub-scales having significant F values.

Group 3 respondents, those with two or three children, tended to score the sub-scales higher than either Group 1 or Group 2. They were more likely to support 15 of the 16 sub-scales where the mean scores differed enough to produce significant F values. These sub-scales were:

3. Seclusion of the Mother

4. Breaking the Will

5. Supremacy of Adult

6. Martyrdom

8. Strictness

9. Irritability

10. Excluding Outside Influences

14. Rejection of Homemaking Role

15. Feeling of Being Tied Down

16. Approval of Activity

18. Avoidance of Communication

19. Inconsiderateness of Husband

- 21. Ascendancy of the Mother
- 25. Encourage Independence
- 26. Dependency of the Mother

Hypothesis IV was accepted because there were differences related to number of children in the family in the mean scores of three groups.

Group Differences - Summary

The sub-scales that showed differences¹ between groups in relation to the factor of age were:

- 5. Supremacy of Adult (p<.05)
- 7. Fear of Harming the Baby (p<.05)
- 14. Rejection of Homemaking Role (p<.10)
- 18. Avoidance of Communication (p<.10)
- 19. Inconsiderateness of Husband (p<.10)
- 21. Ascendancy of the Mother (p<.10)
- 23. Comradeship and Sharing (p<.10)
- 26. Dependency of the Mother (p<.05)

When education of respondents was considered, the sub-scales that showed differences between groups were:

- 2. Fostering Dependency (p<.025)
- 3. Seclusion of the Mother (p<.025)
- 4. Breaking the Will (p<.025)
- 5. Supremacy of Adult (p<.025)
- 6. Martyrdom (p<.025)
- 7. Fear of Harming the Baby (p<.025)
- 8. Strictness (p<.025)

¹F value was significant at level stated.

- 9. Irritability (p<.025)
- 10. Excluding Outside Influence (p<.025)
- 11. Deification (p<.025)
- 13. Suppression of Aggression (p<.10)
- 15. Feeling of Being Tied Down (p<.025)
- 18. Avoidance of Communication (p<.025)
- 19. Inconsiderateness of Husband (p<.025)
- 20. Suppression of Sex (p<.025)
- 21. Ascendancy of the Mother (p<.025)
- 22. Intrusiveness (p<.025)
- 24. Acceleration of Development (p<.025)
- 25. Encourage Independence (p<.10)
- 26. Dependency of the Mother (p<.025)

The sub-scales that showed differences¹ between groups in relation to father's occupation were:

- 2. Fostering Dependency (p<.025)
- 4. Breaking the Will (p<.025)
- 5. Supremacy of Adult (p<.025)
- 6. Martyrdom (p<.10)
- 7. Fear of Harming the Baby (p<.025)
- 10. Excluding Outside Influences (p<.025)
- 12. Loyalty to Parents (p<.10)
- 13. Suppression of Aggression (p<.025)
- 19. Inconsiderateness of Husband (p<.10)

¹F value was significant at level stated.

- 22. Intrusiveness (p<.05)
- 23. Comradeship and Sharing (p<.10)

The sub-scales that showed group differences¹ in relation to number of children in the family were:

- 1. Encouraging Verbalization (p<.025)
- 3. Seclusion of the Mother (p<.025)
- 4. Breaking the Will (p<.025)
- 5. Supremacy of Adult (p<.025)
- 6. Martyrdom (p<.025)
- 8. Strictness (p<.025)
- 9. Irritability (p<.025)
- 10. Excluding Outside Influences (p<.05)
- 14. Rejection of Homemaking Role (p<.025)
- 15. Feeling of Being Tied Down (p<.025)
- 16. Approval of Activity (p<.025)
- 18. Avoidance of Communication (p<.05)
- 19. Inconsiderateness of Husband (p<.025)
- 21. Ascendancy of the Mother (p<.025)
- 25. Encourage Independence (p<.025)
- 26. Dependency of the Mothers (p<.025)

There were two sub-scales that were found to be significantly related to all four variables (age, education, occupation, and family size). These were:

- 5. Supremacy of Adult (p<.05)
- 19. Inconsiderateness of Husband (p<.01)

¹F value was significant at level stated.

Therefore, these sub-scales have high validity and should be included in the Modified Form of the PARI.

Seventeen of the sub-scales showed group differences on two or three of the four variables. These were judged to have validity and should be included in the Modified Form of the PARI. The sub-scales that were significantly related to three of the variables were:

4. Breaking the Will ($p < .05$)
6. Martyrdom ($p < .01$)
7. Fear of Harming the Baby ($p < .05$)
10. Excluding Outside Influences ($p < .05$)
18. Avoidance of Communication ($p < .01$)
21. Ascendancy of the Mother ($p < .01$)
26. Dependency of the Mother ($p < .05$)

Sub-scales that were found to be significantly related to two of the variables were:

2. Fostering Dependency ($p < .025$)
3. Seclusion of the Mother ($p < .025$)
8. Strictness ($p < .025$)
9. Irritability ($p < .025$)
13. Suppression of Aggression ($p < .01$)
14. Rejection of Homemaking Role ($p < .01$)
15. Feeling of Being Tied Down ($p < .025$)
22. Intrusiveness ($p < .05$)
23. Comradeship and Sharing ($p < .01$)
25. Encourage Independence ($p < .01$)

Six sub-scales were found to be significantly related to only one of the four variables. These sub-scales were:

1. Encouraging Verbalization
11. Deification
12. Loyalty to Parents
16. Approval of Activity
20. Suppression of Sex
24. Acceleration of Development

It may be concluded that these sub-scales are of questionable validity and should be carefully reconsidered before being included in a Modified Form of the questionnaire. Sub-scale #17, Value Activity, showed no difference among any of the four variables so is of questionable validity and probably should be excluded from the Modified Form of the PARI.

Reliability--Studies of Change Over Occasions

The decision was made to use a test-retest procedure for determining reliability even though the literature cautions against it on the basis that respondents are often able to recall their responses to previous items. In view of the nature and construction of this study it was felt that the 204 item questionnaire was too long for a respondent to recall accurately her responses to items. The questionnaire was so constructed that the statements making up any one sub-scale were spaced 23 items apart throughout the PARI. A four- to six-week interval between the original and retest interviews made it unlikely that a respondent might remember more than a few items. Furthermore, the forms used for the original interview and for the retest interview

were different--both in the location of the items and in length of the questionnaire. (See Appendix D.) In addition, those who would later become retest respondents were not known to the interviewer at the time of the first interview. The retest respondents were selected at random from the total included in the study sample. Forty-six items of the total 204 items were chosen at random, two items from each of the 23 sub-scales. Fifteen of the retest respondents were designated Group A. Group A retest respondents received a form of the retest questionnaire in which the items were listed in ascending order--the same order as in the original questionnaire. The other 15 respondents, Group D, received a retest questionnaire with the items arranged in descending order (i.e., reversed from the original arrangement). All retest respondents were contacted within a four- to six-week period following the first interview. The interviewer who conducted the retest interview was not the same individual who had conducted the first interview with the respondent.

Table 12 gives the frequency distribution of average test-retest correlation coefficients for responses on the original and re-test items from each of the 23 sub-scales for the 30 mothers. The test-retest correlations ranged from .23 to sub-scale #22, Acceleration of Development, to .65 for sub-scale #10, Excluding Outside Influences. On a single-item basis the mean coefficient was .51.

Each interviewer's impression of the interview was recorded for later analysis. An Interview Evaluation Form, IEF, was devised by the researcher and filled in by the interviewer following the home visit. (See Appendix C.) Questions numbered 1 and 2, 'How did the interview

"go"?' and 'What was the R's understanding of the questionnaire?', were designed to help account for some of the variability in the PARI as these questions focus on the interview process itself. The IEF was filled out twice for the 30 retest respondents. Comparisons using the Rank Sum Test were made between the ratings given by the two interviewers. The researcher was interested in determining any differences between the interviewers' perceptions of the interview.

It would have been encouraging for the meaning of the scales if the interview ratings had shown agreement with the scale scores. However, the association found was slight and inconclusive. It can only be concluded that the interviewers, in relation to each other, were not particularly astute in their observations of the interviews. Comparisons did not show any differences between the two interviewers' perceptions of the interview situation.

Table 12

Frequency Distribution of
Average Test-Retest Correlations

Reliability Range (r)	Sub-scale Numbers (N = 23)
.20 to .29	1; 22
.30 to .39	7
.40 to .49	5; 8; 14; 15; 17; 21
.50 to .59	2; 3; 6; 11; 12; 16; 19; 20; 23
.60 to .69	4; 9; 10; 13; 18

Reliability--Study of Internal Structures

A factor analysis was run for each sub-scale. As a result of the analyses, the 23 sub-scales, designated as Form IV of the PARI were modified to create 26 sub-scales. Correlation coefficients showed more than one construct or factor present in the following sub-scales: #4, Breaking the Will; #11, Deification; #13, Rejection of Homemaking Role; and #15, Approval of Activity. On the basis of those findings, the above-mentioned sub-scales were split and four additional sub-scales were identified and titled: Supremacy of Adult; Loyalty to Parents; Feeling of Being Tied Down; and Value Activity. Two sub-scales included in Form IV of the PARI: #7, Marital Conflict, and #14, Equalitarianism, were omitted from the modified form because the correlation coefficients showed no apparent consistency among the items.

Because of the changes made in the Final Form IV of the PARI, a modified form (see Appendix E) was constructed which included 26 sub-scales and 134 items. The average item-to-item correlations within each of the sub-scales appear in Table 13. Table 13 shows the relationship of the two kinds of correlations: test-retest versus the item-to-item. The test-retest correlations are the mean correlations of all the items included in the particular sub-scale.

Table 13

Average Correlations for Reliability of Sub-scales

Title of Sub-scale	Test- Retest $\bar{r}_{kk'}$	Inter- Item $\bar{r}_{ii'}$	REL	No. of Items
1. Encouraging Verbalization	.2565	.3725	.781	6
2. Fostering Dependency	.5563	.4485	.803	5
3. Seclusion of the Mother	.5274	.3725	.781	6
4. Breaking the Will	.6486	.4843	.790	4
5. Supremacy of Adult*	-	.4465	.763	4
6. Martyrdom	.4102	.3210	.791	8
7. Fear of Harming the Baby	.5444	.1163	.345	4
8. Strictness	.4368	.3217	.740	6
9. Irritability	.6262	.5074	.837	5
10. Excluding Outside Influences	.6501	.2795	.660	5
11. Deification	.5122	.4449	.800	5
12. Loyalty to Parents*	-	.4398	.758	4
13. Suppression of Aggression	.5763	.3319	.749	6
14. Rejection of Homemaking Role	.6177	.4497	.766	4
15. Feeling of Being Tied Down*	-	.5132	.808	4
16. Approval of Activity	.4820	.5237	.815	4
17. Value Activity*	-	.3368	.670	4
18. Avoidance of Communication	.5686	.2844	.705	6
19. Inconsiderateness of Husband	.4658	.3429	.758	6
20. Suppression of Sex	.6028	.3719	.826	8
21. Ascendancy of the Mother	.5962	.3649	.775	6
22. Intrusiveness	.5142	.4126	.808	6
23. Comradeship and Sharing	.4891	.0338	.149	5
24. Acceleration of Development	.2287	.4596	.810	5
25. Encourage Independence*	-	.3689	.700	4
26. Dependency of the Mother	.5991	.4327	.753	4

* = New sub-scale included in the Modified Form of the PARI.

$\bar{r}_{kk'}$ = The average test-retest correlation coefficient.

$\bar{r}_{ii'}$ = The average inter-item correlation coefficient.

REL = The reliability coefficient of the sub-scale.

To represent the various influences on reliability, the following model of effects was proposed for explaining the score made on the i^{th} item by the α^{th} person at the k^{th} occasion (Proctor, 1969).

$$X_{i\alpha k} = \mu_i + f_i T_\alpha + a_{i\alpha} + e_{i\alpha k} + O_{ik}$$

where:

μ_i is item i 's average level of response,

f_i is the factor loading or the amount of the sub-scale that item i contains,

T_α is α 's true score on the sub-scale,

O_{ik} is the effect of the k^{th} occasion on item i ,

$a_{i\alpha}$ is the effect of item i peculiar to person α , and

$e_{i\alpha k}$ is the remaining score not otherwise represented.

Item i 's test-retest correlation or the occasion-to-occasion correlation can be shown as a function of the variances of the model effects as follows:

$$(1) r_{kk'} = \frac{f_i^2 \sigma_T^2 + \sigma_a^2}{f_i^2 \sigma_T^2 + \sigma_a^2 + \sigma_0^2 + \sigma_e^2},$$

where the σ^2 's are variances of the effects as indicated by the subscripts. In a similar fashion the item-by-item correlations on occasion k are represented as:

$$(2) r_{ii'} = \frac{f_i f_{i'} \sigma_T^2}{\sqrt{(f_i^2 \sigma_T^2 + \sigma_e^2) (f_{i'}^2 \sigma_T^2 + \sigma_e^2)}} \doteq \frac{f_i f_{i'} \sigma_T^2}{\bar{f}^2 \sigma_T^2 + \sigma_e^2}$$

where \bar{f} is the average of the f_i 's.

The actual squared correlation between an item's observed score and

the true score, the item's reliability (Lord and Novick, 1968, p. 61), becomes

$$(3) \quad r_{iT}^2 = \frac{f_i^2 \sigma_T^2}{f_i^2 \sigma_T^2 + \sigma_a^2 + \sigma_o^2 + \sigma_e^2} .$$

This latter quantity is what is needed to provide the estimate of the sub-scale reliability, and the following argument is intended to show that for the data the observed item-by-item average correlation should be used.

Table 13 shows that the r_{kk} quantities are generally larger than r_{ii} . Therefore there appears to be a σ_a^2 component. That is, some items likely have a peculiar effect for certain persons. However, σ_o^2 , the occasion effect, is likely small and when f_i differs from f_j this also makes r_{ii} small. The expression for r_{ii} will be less than r_{iT}^2 by virtue of the fact that $f_i f_{i'}$ is on the average less than f_i^2 but more than r_{iT}^2 because σ_a^2 is not included (recall that σ_o^2 must be small). Consequently, r_{ii} will be a useful estimate of r_{iT}^2 since by the above argument expressions (2) and (3) become equal.

The quantity r_{ii} , for a sub-scale as a whole can be calculated as the average inter-item correlation. Since the correlation between two items is given by $f_i f_j$, the average of these was used, or

$$(4) \quad \bar{r}_{ii} = \overline{f_i f_{i'}} = \frac{\sum_{i \neq i'} f_i f_{i'}}{I(I-1)},$$

where I is the number of items in the sub-scale. These values, as mentioned above, are shown in Table 13. The way of calculating the reliability of a scale score composed of I items is to use the Spearman-Brown formula (Lord and Novick, 1968, p. 84):

$$(4) \text{ REL} = \frac{I r_{ii'}}{1 + (I-1)\bar{r}_{ii'}} .$$

These sub-scale reliability coefficient values are also shown in Table 13.

Table 14 gives the frequency distribution of the sub-scale reliability coefficients. The sub-scale reliability coefficients lie mostly in the range from $.70 \pm .05$ to a little over $.80 \pm .05$. There were a few exceptionally low ones, namely, .149 for sub-scale #23, Comradeship and Sharing, and .345 for sub-scale #7, Fear of Harming the Baby. Since reliabilities are greater than the communalities except for sampling fluctuations, it is concluded that these two reliabilities are under-estimates. However, there is evidence that these reliabilities are nonetheless lower than the others. On a sub-scale basis the mean reliability coefficient is $.73 \pm .01$. Schaefer (1961) reported a mean reliability coefficient of .65 for Form IV of the PARI.

The higher reliability coefficient for the Appalachia sample may be explained by the certainty that these respondents exhibited in dealing with the questionnaire. They seemed sure of their beliefs regarding child rearing and generally did not hesitate in responding once they comprehended the statement. This general reaction may be contrasted to the more sophisticated middle-class respondents' reaction. The latter possibly questioned in their own minds the implied meaning of the items and perhaps they were less sure of desired responses. These respondents may have been more aware of conflicting theories of child rearing and perhaps were hazarding desired responses.

Table 14
 Frequency Distribution
 of Sub-scale Reliabilities

Reliability Range (r)	Sub-scale Number (N - 26)
.10 to .19	23
.20 to .29	
.30 to .39	7
.40 to .49	
.50 to .59	
.60 to .69	10; 17
.70 to .79	1; 3; 4; 5; 6; 8; 12; 13; 14; 18; 19; 21; 25; 26
.80 to .89	2; 9; 11; 15; 16; 20; 22; 24

Observations of the Test-taking Process

Cronbach and Meehl (1955, p. 289) state:

One of the best ways of determining informally what accounts for variability on a test is the observation of the person's process of performance.

A planned attempt was made to study and record the interviewers' impression of the interview process. An "Interview Evaluation Form" (IEF) was developed by the researcher to be filled in by each interviewer immediately following the home interview. (See Appendix C.) The five questions composing the IEF were designed to help account for any variability found in the PARI. However, the agreement between the two interviewers on the same subjects was so low that no attempt

was made to use these data.

The interviewers also asked respondents to indicate items or words in items that were not understood. The interviewers circled the number of the questionnaire item that appeared difficult for the respondent to comprehend. No consistency was found when the items circled were recorded and compared. Therefore, no items or words were changed from the modified PARI revised test as it appears in Appendix E.

Correlation Matrices and Factor Analysis

Factor analysis of the sub-scales was performed to reduce the number of measures, or factors. This was performed by discovering the relationship between clusters of items that seemed to go together. Guilford (1948) has expressed the value of factor analysis in construct validation. Cronbach and Meehl (1955, p. 287) extracted his statements as follows:

The personnel psychologist wishes to know 'why his tests are valid'. He can place tests and practical criteria in a matrix and factor it to identify 'real dimensions of human personality'. A factorial description is exact and stable; it is economical in explanation; it leads to the creation of pure tests which can be combined to predict complex behaviors.

The total number of respondents for the factor analysis¹ was 101.

Table 15 indicates that the factor analysis resulted in the identification of five factors which appeared to underlie a variety of discrete parental attitudes.

¹The IBM System/360 at North Carolina State University was used. The reference source of the computation was Kaiser's (1959) varimax rotation. The computational work was done in the Department of Experimental Statistics at North Carolina State University at Raleigh under the direction of Professor C. H. Proctor.

Table 15

Rotated Factor Matrix of Parental Attitudes
(Modified Form of the PARI)

Scale No.	Name	Factor Loadings				
		A	B	C	D	E
Factor A Contentment-Discontentment						
9.	Irritability	.80				
14.	Rejection of Homemaking Role	.78				
19.	Inconsiderateness of Husband	.71				
15.	Feeling of Being Tied Down	.70				
*26.	Dependency on the Mother	.66				
*6.	Martyrdom	.61				
21.	Ascendancy of the Mother	.56				
Factor B Authoritarian - Control						
18.	Avoidance of Communication		.66			
*16.	Approval of Activity		.63			
13.	Suppression of Aggression		.62			
*4.	Breaking the Will		.57			
5.	Supremacy of Adult		.55			
*8.	Strictness		.49			
*10.	Excluding Outside Influences		.42			
Factor C Confidence - Lack of Confidence						
22.	Intrusiveness			.73		
11.	Deification			.73		
3.	Seclusion of the Mother			.71		
2.	Fostering Dependency			.68		
*24.	Acceleration of Development			.67		
7.	Fear of Harming the Baby			.63		
*10.	Excluding Outside Influences			.62		
20.	Suppression of Sexuality			.58		
12.	Loyalty to Parents			.58		
*8.	Strictness			.56		
*4.	Breaking the Will			.49		
*6.	Martyrdom			.48		
*26.	Dependency on the Mother			.41		
Factor D Democratic Attitudes						
1.	Encouraging Verbalization				.75	
23.	Comradeship and Sharing				.74	
Factor E Instrumental Role of Parents						
17.	Value Activity					.69
25.	Encourage Independence					.59
*24.	Acceleration of Development					.46
*16.	Approval of Activity					.43

*These scales also appear in other factors.

Factor A has loadings of .56 and above on seven of the sub-scales. The common trait or element was given the title Contentment-Discontentment by the researcher. The sub-scales which contribute most heavily to the factor are those which measure oppressive, restrictive, and resenting types of attitudes. Stated so that they define the discontentment end of the continuum or scale, these maternal attitudes are: irritability toward children; dislike of being tied down; inconsiderateness of husband; a sense of being victimized and not being appreciated by either husband or child--a feeling of being taken for granted; and a recognition that the mother needs to assert herself for the general well-being of family members. A respondent who agreed with the items in the sub-scales that compose this factor most likely agreed rather strongly with such statements as:

- a. children do at times get on your nerves
- b. women are tied down as a homemaker and a mother,
- c. husbands need to be more understanding and considerate of their wives and families,
- d. mothers are victimized because of their child-bearing and child-rearing responsibilities,
- e. mothers receive little recognition from their children for their parental efforts,
- f. a mother needs to assert herself for the general well-being of the family.

Factor B has loadings ranging from .42 to .66. The trait represented by this factor is identified as Authoritarian Control although

it also contains elements of a hostility - rejection syndrome. Of the 26 scales analyzed, there were seven that related to this trait to a significant degree. If a respondent agreed with the items composing the sub-scales in this factor, then at the authoritarian-control end of the continuum, the following feelings were expressed:

- a. talking with a child about his concerns and interests shouldn't be encouraged,
- b. children need to keep busy and not waste time,
- c. fighting and scrapping among children should be discouraged,
- d. it is desirable to discipline children for their own good and future character development,
- e. children need to learn to respect (even to a degree of fearing) their parents for their own good.

Factor C has a range of loadings from .41 to .73. Thirteen of the 26 sub-scales are included in this factor, six of which are also incorporated in the other four factors. The common trait running through the 13 sub-scales composing this factor refers to a Confidence - Lack of Confidence expression: confidence or lack of confidence in human nature, in the child, in self. If a respondent agreed with the items composing the sub-scales that contribute to this factor, the respondent would support such statements as:

- a. wanting to know the child's every thought and behavior.
- b. feeling a child should revere his parents and not question their views,
- c. feeling a mother's job and responsibility is at home,
- d. fostering the dependency and loyalty of the child,

- e. supporting early toilet training and weaning,
- f. having a fear of harming the baby,
- g. supporting strict discipline and firm rules on the rearing of children,
- h. wishing to exclude outside influences,
- i. wishing to suppress sexuality,
- j. having feelings of being a martyr in the role of a mother and a parent.

The fourth factor (Factor D) identified in the study consisted of two sub-scales: #1, Encouraging Verbalization; and #23, Comradeship and Sharing. The loadings in the two sub-scales was high, .75 and .74 respectively. Factor D can be described as measuring Democratic Attitudes toward child rearing. Theoretically, one would not expect to find this as an independent factor since these sub-scales should load on the negative side of Factor B, Authoritarianism. Apparently, some respondents score high on both authoritarian and democratic attitudes. Factor D is included for discussion purposes only and is identified as a tentative factor needing further study.

The fifth factor, E, included four of the 26 sub-scales and has loadings ranging from .43 and .69. This factor measures the attitude which a parent has toward the adults' part in encouraging the development of the child--the Instrumental Role of Parents in accelerating the child's development. It reflects an attitude that places value on what the child does in relation to physical activity, learning, and growth.

A respondent who agreed with the items in the sub-scales

contributing to the factor of the parental role in development of the child can be described as one who

- a. values physical activity for the child,
- b. encourages the child to be independent,
- c. supports early toilet training and weaning of children,
- d. feels the sooner a child learns to walk the better he's trained,
- e. feels most children should be able to talk by the age of 12 months,
- f. feels there is no reason why a child should not learn to keep his clothes clean very early in life,
- g. feels parents should teach their children that the way to get ahead is to keep busy and not waste time.

Identification of Five Factors

An objective of this study was to compare the response to the PARI of the Appalachia mothers with the response given by middle-class mothers in the Schaefer and Bell (1957) and the Zuckerman, Ribback, Monashkin, and Norton (1958) studies. Three factors extracted in this study were similar to those found by Schaefer and Bell (1957), and Zuckerman, Ribback, Monashkin, and Norton (1958) in their factor analyses with some exceptions which will be noted in the discussion of Factor A. Thus, the factor structure with a rural low-level-of-living sample appears to be substantially the same as that obtained on normative and urban oriented middle-class mothers and a clinically heterogeneous group of mothers.

Factor A in the present study, named Contentment-Discontentment, in general corresponds to Schaefer and Bell's Factor II, labeled "approval of maternal expression of hostility," and Zuckerman's Factor B, "hostility-rejection." In the three analyses the factor measured is defined mainly by the two sub-scales: Irritability, and Rejection of the Homemaking Role. Schaefer and Bell found the scale Strictness a part of the factor while Zuckerman et al. found that Marital Conflict showed a smaller loading on this factor. In the present study five other sub-scales were found to have loadings of over .56 on Factor A, Contentment-Discontentment. The sub-scales were: Inconsiderateness of the Husband; Feeling of Being Tied Down; Dependency on the Mother; Martyrdom; and Ascendancy of the Mother. This suggests that in comparison to the analyses of Schaefer and Bell, and of Zuckerman et al., in this study Factor A was measuring a somewhat different attitude.

Factor B in this study, named Authoritarian-Control, can be compared to Schaefer and Bell's Factor I, "approval of maternal control of the child," and to Zuckerman's Factor A labeled "authoritarian control." Zuckerman et al. found loadings of .60 and above on 16 of the 23 scales; on the same scales found by Schaefer and Bell for their Factor I. In the present study, loadings of .42 and above were found on seven of the sub-scales loaded on this factor. The loadings were generally lower in the present study in comparison to those found by Zuckerman et al., probably reflecting the greater homogeneity of the sample in the present study.

Factor D extracted in this study can be related to Schaefer and

Bell's Factor III, "approval of positive attitudes toward child rearing" and to Zuckerman's Factor C, "democratic attitudes." Schaefer and Bell, and Zuckerman, Ribback, Monashkin, and Norton found the same three scales: Encouraging Verbalization, Comradeship and Sharing, and Equalitarianism, high on the factor. The present study found the first and second sub-scales mentioned above had high negative loadings on this factor. However, the sub-scale Equalitarianism was not included in the factor analysis in the present study because in the item analysis the reliability coefficients for the sub-scale were too low.

Two additional factors were extracted in this study. Factor C, Confidence-Lack of Confidence, had negative loadings of .62 and higher on seven of the 26 sub-scales. The sub-scales which contributed most heavily to this factor are those which measure confidence, intrusive, and security types of attitudes. The factor may also be a measure of a general response set to any questionnaire and not unexpected reflection of the attitudes of mothers living in isolated rural areas.

Factor E was seen to measure the attitude which a parent has toward intervention to accelerate the development of the child. This factor was named Instrumental Role of Parent. Factor E is defined mainly by the sub-scales: Value Activity and Acceleration of Development.

Results and Discussion

Group differences were sought for responses to the 26 sub-scales of the modified PARI. The pattern of means of the sub-scales with age, education of the mother, occupation of father, and number of children in the family are given in Table 16. It was found that 18 of the 26

sub-scales showed significant F values ($p < .025$) for education of the mother¹, while 12 showed significant F values ($p < .025$) for number of children in the family.

Using the $p < .025$ level of significance, age correlates significantly with one of the 26 sub-scales; education with 18; occupation of the father with six; and number of children in the family with 13 of the sub-scales.

The correlations indicate that where the respondents were between the ages of 30 and 34 and had completed high school, where the father was in a white collar occupation or was a farm manager, and where there was only one child in the family, they were on the whole less likely to support the concepts measured by the sub-scales in the modified PARI. It was recognized that the influence of response set may have been in operation with the more educated segment of the sample.

In contrast, the respondents who were 35 years of age and older, who had 8 years or less of formal schooling, where the father was classified as an operative or a service worker, and where there were two or three children in the family, were more apt to score the items higher thus supporting the concepts measured by the sub-scales.

Reliability was assessed in this study by administering a 46-item retest questionnaire to 30 of the 101 respondents. The retest respondents were interviewed in their homes within a four- to six-week interval following the first home interview.

¹Bell and Schaefer (1959) suggested that attention be given to controlling for education of the mother and occupation or income of the father.

Table 16
 F Values for Age¹, Education, Occupation,
 and Number of Children

Title of Sub-scale	Age of Respondent	Education of Respondent	Occupation of Father	Number of Children
1. Encouraging Verbalization	<1	2.3	<1	4.1#
2. Fostering Dependency	1.3	6.8#	3.9#	1.1
3. Seclusion of the Mother	2.2	17.8#	1.9	8.0#
4. Breaking the Will	1.7	5.5#	4.5#	3.2*
5. Supremacy of Adult	3.6*	8.4#	5.8#	6.5#
6. Martyrdom	1.5	13.8#	2.5+	5.5#
7. Fear of Harming the Baby	3.2*	7.2#	3.9#	<1
8. Strictness	2.0	4.1#	2.2	8.6#
9. Irritability	1.5	9.2#	1.5	9.1#
10. Excluding Outside Influences	1.5	5.6#	3.8#	3.3*
11. Deification	1.0	5.1#	<1	1.1
12. Loyalty to Parents	2.3	2.1	2.6+	1.3
13. Suppression of Aggression	2.3	2.7+	6.1#	.5
14. Rejection of Homemaking Role	2.6+	<1	1.5	5.1#
15. Feeling of Being Tied Down	<1	4.4#	<1	6.8#
16. Approval of Activity	2.0	<1	<1	8.9#
17. Value Activity	<1	2.2	1.6	1.3
18. Avoidance of Communication	2.6+	5.1#	<1	3.7*
19. Inconsiderateness of Husband	7.0#	19.1#	2.6+	5.5#
20. Suppression of Sex	1.0	9.4#	1.9	2.0
21. Ascendancy of the Mother	2.6+	9.0#	1.0	9.1#
22. Intrusiveness	1.2	5.7#	3.2*	<1
23. Comradeship and Sharing	2.6+	1.8	2.5+	<1
24. Acceleration of Development	1.9	6.9#	1.5	1.2
25. Encourage Independence	1.9	2.6+	<1	6.9#
26. Dependency of the Mother	3.6*	11.7#	1.7	6.4#

¹The F values given for age, education, and number of children based on an N of 101; the F values given for occupation of the father were based on an N of 86.

F value significant at .025 level

* F value significant at .05 level

+ F value significant at .10 level

The analysis of data involved a factor analysis of the 23 sub-scales identified as Final Form IV of the PARI. This analysis identified those items within sub-scales which had divergent correlations so were subsequently appropriately regrouped to comprise additional sub-scales. The items with low correlations were subsequently eliminated from the questionnaire. Through this process, 26 sub-scales emerged that were composed of four to eight items. This arrangement of 26 sub-scales with a total of 134 items was referred to as the Modified Form of the PARI and is contained in Appendix E.

Five of the 23 sub-scales developed by Schaefer and Bell were subdivided as follows:

Final Form IV of PARI (Schaefer and Bell)		Modified Form of PARI (Noble)	
Scale No.	Name	Sub-scale No.	Name
4.	Breaking the Will	4.	Breaking the Will
		5.	Supremacy of Adult
11.	Deification	11.	Deification
		12.	Loyalty
13.	Rejection of Homemaking Role	14.	Rejection of Homemaking Role
		15.	Feeling of Being Tied Down
15.	Approval of Activity	16.	Approval of Activity
		17.	Value Activity
22.	Acceleration of Development	24.	Acceleration of Development
		25.	Encourage Independence

Two of Schaefer and Bell's 23 sub-scales showed no consistency among the item correlations with the Appalachia sample so these sub-scales were omitted from the factor analysis. These were sub-scale #7,

Marital Conflict, and sub-scale #14, Equalitarianism.

The factor analysis revealed five factors which appeared to underlie a variety of discrete parental attitudes. The factors were named:

1. Factor A: Contentment-Discontentment
2. Factor B: Authoritarian Control
3. Factor C: Confidence-Lack of Confidence
4. Factor D: Democratic Attitudes
5. Factor E: Instrumental Role of Parents

There may arise occasions to use the PARI for a quick assessment of attitudes in a large group rather than on an individual basis. For such purposes, an abbreviated form of the test would be desirable. A technique for deciding the number of items to retain in a sub-scale has been described by Proctor (1967). (See Appendix F.)

CHAPTER V

SUMMARY AND CONCLUSIONS

The study was undertaken because of an interest in developing effective and meaningful parent involvement programs among mothers in lower socio-economic groups. Most of the studies on parental attitudes have utilized middle-class mothers as subjects. While much has been written about working with rural and urban "poor" families, there have been few studies that would aid the program planner in determining content based on known attitudes of the population to be reached.

The purposes of the study were: (1) to present evidence of the validity and reliability of the Parental Attitude Research Instrument (PARI) with a random sample of mothers from a rural, low-level-of-living area of Appalachia, (2) to identify some attitudes of mothers of first grade children toward child rearing and family life as measured by the PARI, and (3) to compare the response to the PARI of the Appalachia mothers with the response given by middle-class mothers in two other selected studies (Schaefer and Bell, 1957; Zuckerman, Ribback, Monashkin, and Norton, 1958).

The population of this study consisted of a sample of mothers of first grade children in four western counties of North Carolina: Avery, Mitchell, Watauga, and Yancy. One hundred and one of these mothers were randomly selected from four elementary schools in the area. Two interviewers indigenous to the area were employed by the

North Carolina Agricultural Extension Service and trained by the researcher to do the initial and retest interviews in the homes of the subjects.

This study was an attempt to provide base line information on the attitudes of rural, low-level-of-living mothers toward child rearing and family life practices. An attitude instrument, the Parental Attitude Research Instrument developed by Schaefer and Bell (1958), was used to collect the information.

In general, the tenets stated in the introduction to this dissertation were upheld. Mothers residing in a rural low-level-of-living area of North Carolina were interested in the development and welfare of their children. This was evidenced by their participation and interest in the study as well as their demonstrated willingness to express opinions and ask questions stimulated by the questionnaire.

A first-stage instrument such as the PARI is useful in assessing the attitudes of rural mothers toward child rearing and family life. It can provide the researcher with an objective measurement of attitudes as a starting place for determining content for programs of parent intervention and involvement.

The validation procedure used in the study was construct validation as defined by Cronbach and Meehl (1955). This involved: (a) determining group differences; (b) studies of change over occasions; (c) studies of internal structure; and (d) observing the test-taking process. Factor analyses were carried out to determine the underlying factors within each of the sub-scales and finally among the sub-scales. A single analysis of variance was performed on the mean scores of three

groupings of respondents to determine significant group differences relative to age and education of the mother, occupation of the father, and number of children in the family.

It was concluded from the results of the analysis that the four hypotheses of this research were supported.

- I. There are differences in mean scores on sub-scales related to the age of the respondent.
- II. There are differences in mean scores on sub-scales related to the educational level of the respondent.
- III. There are differences in mean scores on sub-scales related to the occupation of the father.
- IV. There are differences for some of the sub-scales in mean scores on sub-scales when the number of children in the family is taken into account.

These results support the contention of Bell and Schaefer (1959) that the Parental Attitude Research Instrument is useful as a phase one measuring device. The results of the study also indicate that the five factors extracted may be used in making comparisons with other populations.

The major direction for future research would be in extending the scope of the present work into related areas. These might include:

1. Investigating the extent to which the modified PARI developed in this study might reveal similar factors when administered to other population groups; for example, in low-level-of-living rural areas outside of North Carolina, or in low-level-of-living urban areas.

2. Investigating the extent to which parent involvement programs might modify the child rearing and family life attitudes found in this study.

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APPENDIX A

Parent Information Sheet

PARENT INFORMATION SHEET

Case No. _____

Order No. _____

Name of Child _____ School _____

Name of Parents _____

Address _____

Directions to home _____

1. Age of Mother on last birthday _____
2. Age of Father _____
3. Ages of other Children in the family: _____
4. Mother's Education: Check highest number of years completed
 - _____ 0 to 5
 - _____ 6 to 8
 - _____ 9 to 11
 - _____ Completed High School
 - _____ Technical or Vocational School
 - _____ Some College
 - _____ Completed College
 - _____ Graduate Study
5. Father's Education: Check highest number of years completed
 - _____ 0 to 5
 - _____ 6 to 8
 - _____ 9 to 11
 - _____ Completed High School
 - _____ Technical or Vocational School
 - _____ Some College
 - _____ Completed College
 - _____ Graduate Study
6. Is the Father employed:
 - _____ full time
 - _____ regular part-time
 - _____ occasionally
7. What is the principal occupation of the Father? _____

8. What kind of work does he do? (describe) _____

9. Does he have a second job? (describe) _____
10. Are you (Mother) gainfully employed? (describe) _____

11. Would you tell me the letter which is opposite the correct group of your family's total spendable income, from all sources, for the year 1965?

FAMILY INCOME FOR 1965

- | | |
|------------------------------|------------------------------|
| _____ (A) under \$1,000 | _____ (G) \$6,000 to \$6,999 |
| _____ (B) \$1,000 to \$1,999 | _____ (H) \$7,000 to \$7,999 |
| _____ (C) \$2,000 to \$2,999 | _____ (I) \$8,000 to \$8,999 |
| _____ (D) \$3,000 to \$3,999 | _____ (J) \$9,000 to \$9,999 |
| _____ (E) \$4,000 to \$4,999 | _____ (K) \$10,000 and over |
| _____ (F) \$5,000 to \$5,999 | |

12. Have you been to a group meeting or attended a class in the past three years where the group talked about children and the family? Yes _____ No _____
 Please describe the activity _____

APPENDIX B

Inventory of Attitudes on Family Life and Children

(PARI - Schaefer and Bell)

NOTE: Final form IV or PARI includes the first 115 items of the questionnaire. For the purposes of this research 89 additional items developed by Schaefer and Bell for Trial Form III were added cyclically at the end of the questionnaire.

LAN
11/66

Inventory of Attitudes on Family Life and Children
(PARI - Schaefer and Bell)

Instructions: Read each of the statements below and then ask the respondent (R) to rate them as follows:

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

Record the R's opinion by drawing a circle around the "A" if R strongly agrees, around the "a" if R mildly agrees, around the "d" if R mildly disagrees, and around the "D" if the R strongly disagrees.

There are no right or wrong answers, so encourage the respondent to answer according to her 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.

- | | Agree | Disa-
gree |
|---|-------|---------------|
| 1. Children should be allowed to disagree with their parents if they feel their own ideas are better. | A a | d D |
| 2. A good mother should shelter her child from life's little difficulties. | A a | d D |
| 3. The home is the only thing that matters to a good mother. | A a | d D |
| 4. Some children are just so bad they must be taught to fear adults for their own good. | A a | d D |
| 5. Children should realize how much parents have to give up for them. | A a | d D |
| 6. You must always keep tight hold of baby during his bath for in a careless moment he might slip. | A a | d D |
| 7. People who think they can get along in marriage without arguments just don't know the facts. | A a | d D |
| 8. A child will be grateful later on for strict training. | A a | d D |

9. Children will get on any woman's nerves if she has to be with them all day. A a d D
10. It's best for the child if he never gets started wondering whether his mother's views are right. A a d D
11. More parents should teach their children to have unquestioning loyalty to them. A a d D
12. A child should be taught to avoid fighting no matter what happens. A a d D
13. 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
14. Parents should adjust to the children some rather than always expecting the children to adjust to the parents. A a d D
15. There are so many things a child has to learn in life there is no excuse for him sitting around with time on his hands. A a d D
16. If you let children talk about their troubles they end up complaining even more. A a d D
17. Mothers would do their job better with the children if fathers were more kind. A a d D
18. A young child should be protected from hearing about sex. A a d D
19. If a mother doesn't go ahead and make rules for the home the children and husband will get into troubles they don't need to. A a d D
20. A mother should make it her business to know everything her children are thinking. A a d D
21. Children would be happier and better behaved if parents would show an interest in their affairs. A a d D
22. Most children are toilet trained by 15 months of age. A a d D

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| 23. | There is nothing worse for a young mother than being alone while going through her first experience with a baby. | A | a | d | D |
| 24. | Children should be encouraged to tell their parents about it whenever they feel family rules are unreasonable. | A | a | d | D |
| 25. | A mother should do her best to avoid any disappointment for her child. | A | a | d | D |
| 26. | The women who want lots of parties seldom make good mothers. | A | a | d | D |
| 27. | It is frequently necessary to drive the mischief out of a child before he will behave. | A | a | d | D |
| 28. | A mother must expect to give up her own happiness for that of her child. | A | a | d | D |
| 29. | All young mothers are afraid of their awkwardness in handling and holding the baby. | A | a | d | D |
| 30. | Sometimes it's necessary for a wife to tell off her husband in order to get her rights. | A | a | d | D |
| 31. | Strict discipline develops a fine strong character. | A | a | d | D |
| 32. | Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 33. | A parent should never be made to look wrong in a child's eyes. | A | a | d | D |
| 34. | The child should be taught to revere or respect his parents above all other grown-ups. | A | a | d | D |
| 35. | A child should be taught to always come to his parents or teachers rather than fight when he is in trouble. | A | a | d | D |
| 36. | Having to be with the children all the time gives a woman the feeling her wings have been clipped. | A | a | d | D |

37. Parents must earn the respect of their children by the way they act. A a d D
38. Children who don't try hard for success will feel they have missed out on things later on. A a d D
39. Parents who start a child talking about his worries don't realize that sometimes it's better to just leave well enough alone. A a d D
40. Husbands could do their part if they were less selfish. A a d D
41. It is very important that young boys and girls not be allowed to see each other completely undressed. A a d D
42. Children and husbands do better when the mother is strong enough to settle most of the problems. A a d D
43. A child should never keep a secret from his parents. A a d D
44. Laughing at children's jokes and telling children jokes makes things go more smoothly. A a d D
45. The sooner a child learns to walk the better he's trained. A a d D
46. It isn't fair that a woman has to bear just about all the burden of raising children by herself. A a d D
47. A child has a right to his own point of view and ought to be allowed to express it. A a d D
48. A child should be protected from jobs which might be too tiring or hard for him. A a d D
49. A woman has to choose between having a well run home and hobnobbing around or spending time with neighbors and friends. A a d D
50. A wise parent will teach a child early just who is boss. A a d D

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| 51. | Few women get the gratitude they deserve for all they have done for their children. | A | a | d | D |
| 52. | Mothers never stop blaming themselves if their babies are injured in accidents. | A | a | d | D |
| 53. | No matter how well a married couple love one another, there are always differences which cause irritation and lead to arguments. | A | a | d | D |
| 54. | Children who are held to firm rules grow up to be the best adults. | A | a | d | D |
| 55. | It's a rare mother who can be sweet and even tempered with her children all day. | A | a | d | D |
| 56. | Children should never learn things outside the home which make them doubt their parents' ideas. | A | a | d | D |
| 57. | A child soon learns that there is no greater wisdom than that of his parents. | A | a | d | D |
| 58. | There is no good excuse for a child hitting another child. | A | a | d | D |
| 59. | Most young mothers are bothered more by the feeling of being shut up in the home than by anything else. | A | a | d | D |
| 60. | Children are too often asked to do all the compromising and adjustment and that is not fair. | A | a | d | D |
| 61. | Parents should teach their children that the way to get ahead is to keep busy and not waste time. | A | a | d | D |
| 62. | Children pester you with all their little upsets if you aren't careful from the first. | A | a | d | D |
| 63. | When a mother doesn't do a good job with children it's probably because the father doesn't do his part around the home. | A | a | d | D |
| 64. | Children who take part in sex play become sex criminals when they grow up. | A | a | d | D |

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| 65. | A mother has to do the planning because she is the one who knows what's going on in the home. | A | a | d | D |
| 66. | An alert parent should try to learn all her child's thoughts. | A | a | d | D |
| 67. | Parents who are interested in hearing about their children's parties, dates and fun help them grow up right. | A | a | d | D |
| 68. | The earlier a child is weaned from its emotional ties to its parents the better it will handle its own problems. | A | a | d | D |
| 69. | A wise woman will do anything to avoid being by herself before and after a new baby. | A | a | d | D |
| 70. | A child's ideas should be seriously considered in making family decisions. | A | a | d | D |
| 71. | Parents should know better than to allow their children to be exposed to difficult situations. | A | a | d | D |
| 72. | Too many women forget that a mother's place is in the home. | A | a | d | D |
| 73. | Children need some of the natural meanness taken out of them. | A | a | d | D |
| 74. | Children should be more considerate of their mothers since their mothers suffer so much for them. | A | a | d | D |
| 75. | Most mothers are fearful that they may hurt their babies in handling them. | A | a | d | D |
| 76. | There are some things which just can't be settled by a mild discussion. | A | a | d | D |
| 77. | Most children should have more discipline than they get. | A | a | d | D |
| 78. | Raising children is a nerve-wracking job. | A | a | d | D |
| 79. | The child should not question the thinking of his parents. | A | a | d | D |

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| 80. | Parents deserve the highest esteem or respect and regard of their children. | A | a | d | D |
| 81. | Children should not be encouraged to box or wrestle because it often leads to trouble or injury. | A | a | d | D |
| 82. | 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 |
| 83. | As much as is reasonable a parent should try to treat a child as an equal. | A | a | d | D |
| 84. | A child who is "on the go" all the time will most likely be happy. | A | a | d | D |
| 85. | If a child has upset feelings it is best to leave him alone and not make it look serious. | A | a | d | D |
| 86. | If mothers could get their wishes they would most often ask that their husband be more understanding. | A | a | d | D |
| 87. | Sex is one of the greatest problems to be contended with or to put up with in children. | A | a | d | D |
| 88. | The whole family does fine if the mother puts her shoulders to the wheel and takes charge of things. | A | a | d | D |
| 89. | A mother has a right to know everything going on in her child's life because her child is part of her. | A | a | d | D |
| 90. | If parents would have fun with their children, the children would be more apt to take their advice. | A | a | d | D |
| 91. | A mother should make an effort to get her child toilet trained at the earliest possible time. | A | a | d | D |
| 92. | Most women need more time than they are given to rest up in the home after going through childbirth. | A | a | d | D |

93. 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
94. Children should be kept away from all hard jobs which might be discouraging. A a d D
95. A good mother will find enough social life within the family. A a d D
96. It is sometimes necessary for the parents to break the child's will. A a d D
97. Mothers sacrifice almost all their own fun for their children. A a d D
98. A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby. A a d D
99. It's natural to have quarrels when two people who both have minds of their own get married. A a d D
100. Children are actually happier under strict training. A a d D
101. It's natural for a mother to "blow her top" when children are selfish and demanding. A a d D
102. There is nothing worse than letting a child hear criticisms of his mother. A a d D
103. Loyalty to parents comes before anything else. A a d D
104. Most parents prefer a quiet child to a "scrappy" one. A a d D
105. A young mother feels "held down" because there are lots of things she wants to do while she is young. A a d D
106. 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

107. The sooner a child learns that a wasted minute is lost forever the better off he will be. A a d D
108. The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested. A a d D
109. Few men realize that a mother needs some fun in life too. A a d D
110. There is usually something wrong with a child who asks a lot of questions about sex. A a d D
111. A married woman knows that she will have to take the lead in family matters. A a d D
112. It is a mother's duty to make sure she knows her child's innermost thoughts. A a d D
113. When you do things together, children feel close to you and can talk easier. A a d D
114. A child should be weaned away from the bottle or breast as soon as possible. A a d D
115. Taking care of a small baby is something that no woman should be expected to do all by herself. A a d D
116. Children should be allowed to talk about it if they are angry with their parents. A a d D
117. A child is most lovable when he is small and helpless. A a d D
118. A woman can't do a mother's job and have an active social life too. A a d D
119. Children should fear their parents to some degree. A a d D
120. Children don't realize that it mainly takes suffering to be a good parent. A a d D
121. Mothers often worry that people playing with the baby might be too rough. A a d D

122. Sometimes the only way for a wife to get her husband to consider her point of view is to show how hurt she is. A a d D
123. Severe discipline is essential in the training of children. A a d D
124. A small child's wild play ties a mother's nerves in knots. A a d D
125. No matter what happens a child should respect his parents' opinion. A a d D
126. A child should always love his parents above everyone else. A a d D
127. A gentle child will get much further in life than the "rough-house" type. A a d D
128. Husbands should know how "hemmed in" a woman feels staying in the home a great deal. A a d D
129. Parents should be as courteous and considerate with their children as they are with anyone else. A a d D
130. A very active life is the best life for the child. A a d D
131. Trying to help a child understand his fears most often makes his fear look more important than it is. A a d D
132. Things that are important to a woman get treated all too often by the husband as though they didn't matter at all. A a d D
133. Children who often try to find out about sex most likely have harmful sex habits. A a d D
134. Very few people understand how much a happy home depends upon a mother's being willing to direct the family life. A a d D
135. Children have no right to keep anything from their parents. A a d D
136. It is good for parents and teen-agers to have a friend-to-friend attitude. A a d D

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|------|---|---|---|---|---|
| 137. | Most children should be able to talk by the age of 12 months. | A | a | d | D |
| 138. | Most women need the kind of doctor who will help with the problems of their family. | A | a | d | D |
| 139. | Children should be allowed to gripe about rules which their parents make. | A | a | d | D |
| 140. | A good parent should advise a child not to get into things which might be a strain on him. | A | a | d | D |
| 141. | Having small children is enough for any woman without having to look for things to do outside the home. | A | a | d | D |
| 142. | Some children are just naturally bad. | A | a | d | D |
| 143. | Parents should sacrifice everything for their children. | A | a | d | D |
| 144. | There is no excusing the mother if a baby gets hurt. | A | a | d | D |
| 145. | It's natural for a husband and wife who must make all important decisions together to disagree and quarrel at times. | A | a | d | D |
| 146. | If rules are not closely enforced children will misbehave and get into trouble. | A | a | d | D |
| 147. | A parent has a right to show anger whenever children become nuisances. | A | a | d | D |
| 148. | There is no excusing someone who upsets the confidence a child has in his parents' ways of doing things. | A | a | d | D |
| 149. | All a child is and hopes to be he owes to his parents. | A | a | d | D |
| 150. | Children who are gentlemanly or ladylike are preferable to those who are tomboys or "regular guys." | A | a | d | D |
| 151. | It isn't fair that men have a chance for interesting work and women mostly have to do the hard job of keeping the home. | A | a | d | D |

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| 152. | Parents should respect the rights of children as much as they expect the children to respect parent's rights. | A | a | d | D |
| 153. | Children should learn to work and play hard. | A | a | d | D |
| 154. | It is best right from the beginning to avoid looking too sympathetic with the many worries children have. | A | a | d | D |
| 155. | In the give and take of family life too many men take more than they give. | A | a | d | D |
| 156. | If children are not warned about sex they may indulge in harmful sex play. | A | a | d | D |
| 157. | One good reason mothers so often are the ones who run the home is that they are more understanding of children. | A | a | d | D |
| 158. | More parents should make it their job to know everything their child is doing. | A | a | d | D |
| 159. | It is good for parents to develop a close feeling with their children by doing things with them. | A | a | d | D |
| 160. | A child should be encouraged to stand on his own feet as soon as possible. | A | a | d | D |
| 161. | No matter how much a young mother knows she still should have her mother or some older woman around. | A | a | d | D |
| 162. | Children should be encouraged to express their opinions about anything which involves them. | A | a | d | D |
| 163. | Good mothers are careful to watch out for young children to make sure they don't overdo things. | A | a | d | D |
| 164. | Women who belong to clubs very often neglect their families. | A | a | d | D |
| 165. | A good whipping now and then never hurt any child. | A | a | d | D |
| 166. | Parents have to give until it hurts. | A | a | d | D |

167. A good mother must always be careful so that in a sleepy or busy moment she won't neglect the baby or hurt him. A a d D
168. If the husband doesn't see the wife's point of view it's often best to just keep to oneself until things cool off. A a d D
169. Firm enforcement of all rules never really hurts a child. A a d D
170. It's a mother's right to refuse to put up with a child's annoyances. A a d D
171. Children should be kept away from people with ideas which are different from their parents'. A a d D
172. The best reared child feels great admiration and devotion for his mother. A a d D
173. Children should be taught not to hit back even if someone else hits them. A a d D
174. Raising children is very much harder than most jobs men do. A a d D
175. Children have a right to expect parents to be honest with them at all times. A a d D
176. A child who is kept busy will not get into mischief. A a d D
177. The biggest trouble with children's fears is parents who make too much over them. A a d D
178. More men should at least be as considerate of their families as they are with their friends. A a d D
179. Answering questions about sex is embarrassing and unnecessary. A a d D
180. A mother's duty is to see to it that the whole family does what she knows is best. A a d D
181. If a mother is not careful a child may be thinking things she does not know about. A a d D

182. Parents need to do things with children so there will be other things to talk about besides telling them what is wrong, what they must do, etc. A a d D
183. The sooner a child realizes that he has to fight his own battles the better. A a d D
184. Children don't realize how lonely and in need of help a woman can feel trying to do her job as a mother. A a d D
185. Many children, like horses, must be broken in order to be trained. A a d D
186. To take care of their children mothers must neglect their own welfare. A a d D
187. A parent should never let children get away with anything they aren't suppose to do. A a d D
188. Few children show enough respect for their parents. A a d D
189. A good child doesn't fight with other children. A a d D
190. If a parent sees that a child is right and the parent is wrong, he should admit it and change his behavior. A a d D
191. A well-behaved child isn't curious about sex. A a d D
192. A good mother wants to have a share in all of her child's experiences. A a d D
193. Parents should be playful rather than dignified with children. A a d D
194. There is no reason why a child should not learn to keep his clothes clean very early in life. A a d D
195. To keep from getting into trouble a child should have a healthy fear of adults. A a d D
196. A mother has to suffer much and say little. A a d D

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|------|---|---|---|---|---|
| 197. | If children are to grow up and get somewhere in life they must be continuously kept after. | A | a | d | D |
| 198. | Parents are not entitled to the love of their children unless they earn it. | A | a | d | D |
| 199. | If children quarrel they have been poorly trained. | A | a | d | D |
| 200. | Promises to children should be kept as faithfully as those to adults. | A | a | d | D |
| 201. | It is not the duty of the parent to teach the child about sex. | A | a | d | D |
| 202. | If children are quiet for a little while a mother should immediately find out what they are thinking about. | A | a | d | D |
| 203. | Children should always feel their parents are interested in what happens to them. | A | a | d | D |
| 204. | A child must learn independence even at the risk of getting hurt. | A | a | d | D |

APPENDIX C

Interview Evaluation Form

INTERVIEW EVALUATION FORM

(To be completed immediately after leaving Respondent's home)

Respondent's Name

Case Number

1. How did the interview "go"?
 - _____ 5 excellent throughout
 - _____ 4 average
 - _____ 3 poor throughout
 - _____ 2 started poor, became good
 - _____ 1 started good, became poor

2. What was the R's understanding of the questionnaire?
 - _____ 4 above average, quick to indicate answer
 - _____ 3 average
 - _____ 2 slow to answer, asked for explanations on items
 - _____ 1 poor understanding of items
 - _____ 0 I could not tell

3. What did you sense the R's attitude was toward being a homemaker, a wife and a mother?
 - _____ 4 She seemed very contented and satisfied
 - _____ 3 She seemed moderately contented
 - _____ 2 She seemed to feel rather frustrated
 - _____ 1 She seemed to feel very frustrated and resentful
 - _____ 0 I could not tell

4. What was your general impression of the R's attitude toward encouraging "togetherness" with her children?
 - _____ 4 She seemed to feel this was very desirable
 - _____ 3 She seemed to feel this was moderately desirable
 - _____ 2 She seemed to feel that this was not too important
 - _____ 1 She seemed to feel that this was not at all important
 - _____ 0 I could not tell

5. What was your general impression of the R's attitude toward answering the questionnaire?
 - _____ 4 She seemed very positive about her opinions
 - _____ 3 She seemed moderately positive about her opinions
 - _____ 2 She seemed rather unsure about her opinions
 - _____ 1 She seemed very unsure about her opinions
 - _____ 0 I could not tell

APPENDIX D

Retest Questionnaires

LAN
1/67/A

Inventory of Attitudes on Family Life and Children
(PARI - Schaefer and Bell)

Instructions: Read each of the statements below and then ask the respondent (R) to rate them as follows:

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

Record the R's opinion by drawing a circle around the "A" if R strongly agrees, around the "a" if R mildly agrees, around the "d" if R mildly disagrees, and around the "D" if the R strongly disagrees.

There are no right or wrong answers, so encourage the respondent to answer according to her 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.

- | | Agree | Disa-
gree |
|---|-------|---------------|
| 1. Children should be allowed to disagree with their parents if they feel their own ideas are better. | A a | d D |
| 2. The home is the only thing that matters to a good mother. | A a | d D |
| 3. Children will get on any woman's nerves if she has to be with them all day. | A a | d D |
| 4. Mothers would do their job better with the children if fathers were more kind. | A a | d D |
| 5. A young child should be protected from hearing about sex. | A a | d D |
| 6. Children would be happier and better behaved if parents would show an interest in their affairs. | A a | d D |
| 7. A mother should do her best to avoid any disappointment for her child. | A a | d D |
| 8. Mothers very often feel that they can't stand their children a moment longer. | A a | d D |

- | | | | | | |
|-----|--|---|---|---|---|
| 9. | Having to be with the children all the time gives a woman the feeling her wings have been clipped. | A | a | d | D |
| 10. | Mothers never stop blaming themselves if their babies are injured in accidents. | A | a | d | D |
| 11. | No matter how well a married couple love one another, there are always differences which cause irritation and lead to arguments. | A | a | d | D |
| 12. | Children who take part in sex play become sex criminals when they grow up. | A | a | d | D |
| 13. | A mother has to do the planning because she is the one who knows what's going on in the home. | A | a | d | D |
| 14. | Most children should have more discipline than they get. | A | a | d | D |
| 15. | The child should not question the thinking of his parents. | A | a | d | D |
| 16. | Parents deserve the highest esteem and regard of their children. | A | a | d | D |
| 17. | A child who is "on the go" all the time will most likely be happy. | A | a | d | D |
| 18. | A mother has a right to know everything going on in her child's life because her child is part of her. | A | a | d | D |
| 19. | Most women need more time than they are given to rest up in the home after going through childbirth. | A | a | d | D |
| 20. | A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby. | A | a | d | D |
| 21. | There is nothing worse than letting a child hear criticisms of his mother. | A | a | d | D |
| 22. | Loyalty to parents comes before anything else. | A | a | d | D |

- | | | | | | |
|-----|--|---|---|---|---|
| 23. | Most parents prefer a quiet child to a "scrappy" one. | A | a | d | D |
| 24. | A young mother feels "held down" because there are lots of things she wants to do while she is young. | A | a | d | D |
| 25. | The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested. | A | a | d | D |
| 26. | Few men realize that a mother needs some fun in life too. | A | a | d | D |
| 27. | A married woman knows that she will have to take the lead in family matters. | A | a | d | D |
| 28. | A child should be weaned away from the bottle or breast as soon as possible. | A | a | d | D |
| 29. | Taking care of a small baby is something that no woman should be expected to do all by herself. | A | a | d | D |
| 30. | Children should fear their parents to some degree. | A | a | d | D |
| 31. | Children don't realize that it mainly takes suffering to be a good parent. | A | a | d | D |
| 32. | Sometimes the only way for a wife to get her husband to consider her point of view is to show how hurt she is. | A | a | d | D |
| 33. | A gentle child will get much further in life than the "rough-house" type. | A | a | d | D |
| 34. | Parents should be as courteous and considerate with their children as they are with anyone else. | A | a | d | D |
| 35. | A very active life is the best life for the child. | A | a | d | D |
| 36. | Trying to help a child understand his fears most often makes his fear look more important than it is. | A | a | d | D |
| 37. | It is good for parents and teen-agers to have a friend-to-friend attitude. | A | a | d | D |

- | | | | | | |
|-----|---|---|---|---|---|
| 38. | Most children should be able to talk by the age of 12 months. | A | a | d | D |
| 39. | Children should be allowed to gripe about rules which their parents make. | A | a | d | D |
| 40. | A good parent should advise a child not to get into things which might be a strain on him. | A | a | d | D |
| 41. | If rules are not closely enforced children will misbehave and get into trouble. | A | a | d | D |
| 42. | Women who belong to clubs very often neglect their families. | A | a | d | D |
| 43. | Many children, like horses, must be broken in order to be trained. | A | a | d | D |
| 44. | To take care of their children mothers must neglect their own welfare. | A | a | d | D |
| 45. | If a parent sees that a child is right and the parent is wrong, he should admit it and change his behavior. | A | a | d | D |
| 46. | A good mother wants to have a share in all of her child's experiences. | A | a | d | D |

Inventory of Attitudes on Family Life and Children
(PARI - Schaefer and Bell)

Instructions: Read each of the statements below and then ask the respondent (R) to rate them as follows:

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

Record the R's opinion by drawing a circle around the "A" if R strongly agrees, around the "a" if R mildly agrees, around the "d" if R mildly disagrees, and around the "D" if the R strongly disagrees.

There are no right or wrong answers, so encourage the respondent to answer according to her 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.

- | | | Disa-
Agree | Disa-
gree |
|--|---|----------------|---------------|
| 1. A good mother wants to have a share in all of her child's experiences. | A | a | d D |
| 2. If a parent sees that a child is right and the parent is wrong, he should admit it and change his behavior. | A | a | d D |
| 3. To take care of their children mothers must neglect their own welfare. | A | a | d D |
| 4. Many children, like horses, must be broken in order to be trained. | A | a | d D |
| 5. Women who belong to clubs very often neglect their families. | A | a | d D |
| 6. If rules are not closely enforced children will misbehave and get into trouble. | A | a | d D |
| 7. A good parent should advise a child not to get into things which might be a strain on him. | A | a | d D |
| 8. Children should be allowed to gripe about rules which their parents make. | A | a | d D |

- | | | | | | |
|-----|--|---|---|---|---|
| 9. | Most children should be able to talk by the age of 12 months. | A | a | d | D |
| 10. | It is good for parents and teen-agers to have a friend-to-friend attitude. | A | a | d | D |
| 11. | Trying to help a child understand his fears most often makes his fear look more important than it is. | A | a | d | D |
| 12. | A very active life is the best life for the child. | A | a | d | D |
| 13. | Parents should be as courteous and considerate with their children as they are with anyone else. | A | a | d | D |
| 14. | A gentle child will get much further in life than the "rough-house" type. | A | a | d | D |
| 15. | Sometimes the only way for a wife to get her husband to consider her point of view is to show how hurt she is. | A | a | d | D |
| 16. | Children don't realize that it mainly takes suffering to be a good parent. | A | a | d | D |
| 17. | Children should fear their parents to some degree. | A | a | d | D |
| 18. | Taking care of a small baby is something that no woman should be expected to do all by herself. | A | a | d | D |
| 19. | A child should be weaned away from the bottle or breast as soon as possible. | A | a | d | D |
| 20. | A married woman knows that she will have to take the lead in family matters. | A | a | d | D |
| 21. | Few men realize that a mother needs some fun in life too. | A | a | d | D |
| 22. | The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested. | A | a | d | D |
| 23. | A young mother feels "held down" because there are lots of things she wants to do while she is young. | A | a | d | D |

24. Most parents prefer a quiet child to a "scrappy" one. A a d D
25. Loyalty to parents comes before anything else. A a d D
26. There is nothing worse than letting a child hear criticisms of his mother. A a d D
27. A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby. A a d D
28. Most women need more time than they are given to rest up in the home after going through childbirth. A a d D
29. A mother has a right to know everything going on in her child's life because her child is part of her. A a d D
30. A child who is "on the go" all the time will most likely be happy. A a d D
31. Parents deserve the highest esteem and regard of their children. A a d D
32. The child should not question the thinking of his parents. A a d D
33. Most children should have more discipline than they get. A a d D
34. A mother has to do the planning because she is the one who knows what's going on in the home. A a d D
35. Children who take part in sex play become sex criminals when they grow up. A a d D
36. No matter how well a married couple love one another, there are always differences which cause irritation and lead to arguments. A a d D
37. Mothers never stop blaming themselves if their babies are injured in accidents. A a d D

- | | | | | | |
|-----|--|---|---|---|---|
| 38. | Having to be with the children all the time gives a woman the feeling her wings have been clipped. | A | a | d | D |
| 39. | Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 40. | A mother should do her best to avoid any disappointment for her child. | A | a | d | D |
| 41. | Children would be happier and better behaved if parents would show an interest in their affairs. | A | a | d | D |
| 42. | A young child should be protected from hearing about sex. | A | a | d | D |
| 43. | Mothers would do their job better with the children if fathers were more kind. | A | a | d | D |
| 44. | Children will get on any woman's nerves if she has to be with them all day. | A | a | d | D |
| 45. | The home is the only thing that matters to a good mother. | A | a | d | D |
| 46. | Children should be allowed to disagree with their parents if they feel their own ideas are better. | A | a | d | D |

APPENDIX E

Modified Form of Parental Attitude Research Instrument

Modified Form of Parental Attitude Research Instrument
(Noble 1969)

Sub-scale

1. Encouraging Verbalization

Item

- 24. Children should be encouraged to tell their parents about it whenever they feel family rules are unreasonable.
- 47. A child has a right to his own point of view and ought to be allowed to express it.
- 70. A child's ideas should be seriously considered in making family decisions.
- 93. When a child is in trouble he ought to know he won't be punished for talking about it with his parents.
- 116. Children should be allowed to talk about it if they are angry with their parents.
- 162. Children should be encouraged to express their opinions about anything which involves them.

2. Fostering Dependency

Item

- 2. A good mother should shelter her child from life's little difficulties.
- 25. A mother should do her best to avoid any disappointment for her child.
- 71. Parents should know better than to allow their children to be exposed to difficult situations.
- 94. Children should be kept away from all hard jobs which might be discouraging.
- 117. A child is most lovable when he is small and helpless.

Sub-scale

3. Seclusion of the Mother

Item

- 3. The home is the only thing that matters to a good mother.
- 72. Too many women forget that a mother's place is in the home.
- 95. A good mother will find enough social life within the family.
- 118. A woman can't do a mother's job and have an active social life too.
- 141. Having small children is enough for any woman without having to look for things to do outside the home.
- 164. Women who belong to clubs very often neglect their families.

4. Breaking the Will

Item

- 27. It is frequently necessary to drive the mischief out of a child before he will behave.
- 96. It is sometimes necessary for the parents to break the child's will.
- 142. Some children are just naturally bad.
- 165. A good whipping now and then never hurt any child.

5. Supremacy of Adult

Item

- 4. Some children are just so bad they must be taught to fear adults for their own good.
- 50. A wise parent will teach a child early just who is boss.
- 73. Children need some of the natural meanness ~~taken out~~ of them.
- 119. Children should fear their parents to some degree.

Sub-scale

6. Martyrdom

Item

- 5. Children should realize how much parents have to give up for them.
- 51. Few women get the gratitude they deserve for all they have done for their children.
- 74. Children should be more considerate of their mothers since their mothers suffer so much for them.
- 97. Mothers sacrifice almost all their own fun for their children.
- 120. Children don't realize that it mainly takes suffering to be a good parent.
- 166. Parents have to give until it hurts.
- 186. To take care of their children mothers must neglect their own welfare.
- 196. A mother has to suffer much and say little.

7. Fear of Harming the Baby

Item

- 6. You must always keep tight hold of baby during his bath for in a careless moment he might slip.
- 52. Mothers never stop blaming themselves if their babies are injured in accidents.
- 98. A mother's greatest fear is that in a forgetful moment she might let something bad happen to the baby.
- 144. There is no excusing the mother if a baby gets hurt.

8. Strictness

Item

- 31. Strict discipline develops a fine strong character.
- 54. Children who are held to firm rules grow up to be the best adults.

SubscaleItem

- 77. Most children should have more discipline than they get.
- 123. Severe discipline is essential in the training of children.
- 146. If rules are not closely enforced children will misbehave and get into trouble.
- 197. If children are to grow up and get somewhere in life they must be continuously kept after.

9. Irritability

Item

- 9. Children will get on any woman's nerves if she has to be with them all day.
- 32. Mothers very often feel that they can't stand their children a moment longer.
- 55. It's a rare mother who can be sweet and even tempered with her children all day.
- 78. Raising children is a nerve-wracking job.
- 124. A small child's wild play ties a mother's nerves in knots.

10. Excluding Outside Influences

Item

- 10. It's best for the child if he never gets started wondering whether his mother's views are right.
- 56. Children should never learn things outside the home which make them doubt their parents' ideas.
- 79. The child should not question the thinking of his parents.
- 102. There is nothing worse than letting a child hear criticisms of his mother.
- 171. Children should be kept away from people with ideas which are different from their parents'.

Subscale

11. Deification

Item

- 34. The child should be taught to revere or respect his parents above all other grown-ups.
- 57. A child soon learns that there is no greater wisdom than that of his parents.
- 80. Parents deserve the highest esteem or respect and regard of their children.
- 103. Loyalty to parents comes before anything else.
- 126. A child should always love his parents above everyone else.

12. Loyalty to Parents

Item

- 11. More parents should teach their children to have unquestioning loyalty to them.
- 149. All a child is and hopes to be he owes to his parents.
- 172. The best reared child feels great admiration and devotion for his mother.
- 188. Few children show enough respect for their parents.

13. Suppression of Agression

- 12. A child should be taught to avoid fighting no matter what happens.
- 58. There is no good excuse for a child hitting another child.
- 104. Most parents prefer a quiet child to a "scrappy" one.
- 173. Children should be taught not to hit back even if someone else hits them.
- 189. A good child doesn't fight with other children.
- 199. If children quarrel they have been poorly trained.

Subscale

14. Rejection of Homemaking Role

Item

82. One of the bad things about raising children is that you aren't free enough of the time to do just as you like.
128. Husbands should know how "hemmed in" a woman feels staying in the home a great deal.
151. It isn't fair that men have a chance for interesting work and women mostly have to do the hard job of keeping the home.
174. Raising children is very much harder than most jobs men do.

15. Feeling of Being Tied Down

Item

13. One of the worst things about taking care of a home is a woman feels that she can't get out.
36. Having to be with the children all the time gives a woman the feeling her wings have been clipped.
59. Most young mothers are bothered more by the feeling of being shut up in the home than by anything else.
105. A young mother feels "held down" because there are lots of things she wants to do while she is young.

16. Approval of Activity

Item

61. Parents should teach their children that the way to get ahead is to keep busy and not waste time.
107. The sooner a child learns that a wasted minute is lost forever the better off he will be.
130. A very active life is the best life for the child.
153. Children should learn to work and play hard.

Subscale

17. Value Activity

Item

15. There are so many things a child has to learn in life there is no excuse for him sitting around with time on his hands.
38. Children who don't try hard for success will feel they have missed out on things later on.
84. A child who is "on the go" all the time will most likely be happy.
176. A child who is kept busy will not get into mischief.

18. Avoidance of Communication

Item

39. Parents who start a child talking about his worries don't realize that sometimes it's better to just leave well enough alone.
62. Children pester you with all their little upsets if you aren't careful from the first.
85. If a child has upset feelings it is best to leave him alone and not make it look serious.
108. The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested.
154. It is best right from the beginning to avoid looking too sympathetic with the many worries children have.
177. The biggest trouble with children's fears is parents who make too much over them.

19. Inconsiderateness of Husband

40. Husbands could do their part if they were less selfish.
86. If mothers could get their wishes they would most often ask that their husband be more understanding.
109. Few men realize that a mother needs some fun in life too.

SubscaleItem

132. Things that are important to a woman get treated all too often by the husband as though they didn't matter at all.
155. In the give and take of family life too many men take more than they give.
178. More men should at least be as considerate of their families as they are with their friends.

20. Suppression of Sex

Item

18. A young child should be protected from hearing about sex.
64. Children who take part in sex play become sex criminals when they grow up.
87. Sex is one of the greatest problems to be contended with or to put up with in children.
110. There is usually something wrong with a child who asks a lot of questions about sex.
133. Children who often try to find out about sex most likely have harmful sex habits.
179. Answering questions about sex is embarrassing and unnecessary.
191. A well-behaved child isn't curious about sex.
201. It is not the duty of the parent to teach the child about sex.

21. Ascendancy of the Mother

Item

19. If a mother doesn't go ahead and make rules for the home the children and husband will get into troubles they don't need to.
42. Children and husbands do better when the mother is strong enough to settle most of the problems.

SubscaleItem

- 65. A mother has to do the planning because she is the one who knows what's going on in the home.
- 88. The whole family does fine if the mother puts her shoulders to the wheel and takes charge of things.
- 111. A married woman knows that she will have to take the lead in family matters.
- 134. Very few people understand how much a happy home depends upon a mother's being willing to direct the family life.

22. Intrusiveness

Item

- 66. An alert parent should try to learn all her child's thoughts.
- 89. A mother has a right to know everything going on in her child's life because her child is part of her.
- 112. It is a mother's duty to make sure she knows her child's innermost thoughts.
- 158. More parents should make it their job to know everything their child is doing.
- 181. If a mother is not careful a child may be thinking things she does not know about.
- 192. A good mother wants to have a share in all of her child's experiences.

23. Comradeship and Sharing

Item

- 44. Laughing at children's jokes and telling children jokes makes things go more smoothly.
- 90. If parents would have fun with their children, the children would be more apt to take their advice.
- 136. It is good for parents and teen-agers to have a friend-to-friend attitude.

SubscaleItem

159. It is good for parents to develop a close feeling with their children by doing things with them.
182. Parents need to do things with children so there will be other things to talk about besides telling them what is wrong, what they must do, etc.

24. Acceleration of Development

Item

22. Most children are toilet trained by 15 months of age.
45. The sooner a child learns to walk the better he's trained.
91. A mother should make an effort to get her child toilet trained at the earliest possible time.
114. A child should be weaned away from the bottle or breast as soon as possible.
194. There is no reason why a child should not learn to keep his clothes clean very early in life.

25. Encourage Independence

Item

137. Most children should be able to talk by the age of 12 months.
160. A child should be encouraged to stand on his own feet as soon as possible.
183. The sooner a child realizes that he has to fight his own battles the better.
204. A child must learn independence even at the risk of getting hurt.

26. Dependency of the Mother

Item

46. It isn't fair that a woman has to bear just about all the burden of raising children by herself.

SubscaleItem

92. Most women need more time than they are given to rest up in the home after going through childbirth.
161. No matter how much a young mother knows she still should have her mother or some older woman around.
184. Children don't realize how lonely and in need of help a woman can feel trying to do her job as a mother.

APPENDIX F

A Scheme to Decide on the Number of Items
to Retain in a Sub-scale

A Scheme to Decide on the Number of Items to Retain in a Sub-scale

C. H. Proctor, August 11, 1967

The original problem that led to the scheme arose after many items of an attitude scale had been administered to a sample of subjects. These items were of an agree-disagree four-point-response nature. The items had been grouped into sub-scale areas so a factor analysis was done for each sub-scale's items. In some sub-scale areas only one factor appeared with a sizeable amount of variance and this is the case we will consider. The problem was then to decide on the basis of the factor loadings which items if any to eliminate from the final version of the instrument.

The loadings will be denoted f_1, f_2, \dots, f_p and these are regarded as the population values. Without loss of generality they will be taken to be ordered: $f_1 > f_2 > \dots > f_p$. The sub-scale score may be an unweighted sum of the k items with largest loadings or a weighted one. If the standardized item scores be denoted X_1, X_2, \dots, X_p then as an unweighted score using k items we will use:

$$\tilde{Z}_u = (X_1 + X_2 + \dots + X_k) / \sum_{i=1}^k f_i = y_k / F_k,$$

where the last equality defines y_k and F_k .

We will denote by Z the standardized general factor score for the sub-scale. Then $X_i = f_i Z + \epsilon_i$ represents the model equation for the

X_i distribution with the ϵ_i being independent and with $E(\epsilon_i) = 0$ and $V(\epsilon_i) = 1 - f_i^2$. This shows that $\tilde{Z}_u = Z + \sum_{i=1}^k \epsilon_i / F_k$ and since

$$V\left(\sum_{i=1}^k \epsilon_i\right) = \sum_{i=1}^k (1 - f_i^2) = k - \sum_{i=1}^k f_i^2 = k - \mathfrak{F}_k \quad \text{say,}$$

we have that

$$V(\tilde{Z}_u) = 1 + (k - \mathfrak{F}_k) / F_k^2.$$

For a given subject with a given Z-score the variance of \tilde{Z} is just $(k - \mathfrak{F}_k) / F_k^2$ and will be denoted $EV_u(k)$, the error variance using k un-weighted items.

Using weights on the X_i 's so as to minimize the error variance produces the sub-scale score

$$\begin{aligned} \tilde{Z}_w &= \frac{\sum_{i=1}^k f_i X_i / (1 - f_i^2)}{\left[\sum_{i=1}^k f_i^2 / (1 - f_i^2) \right]^{-1}} \\ &= Z + \frac{\sum_{i=1}^k f_i \epsilon_i / (1 - f_i^2)}{\left[\sum_{i=1}^k f_i^2 / (1 - f_i^2) \right]^{-1}}, \end{aligned}$$

with variance

$$V(\tilde{Z}_w) = 1 + \left[\sum_{i=1}^k f_i^2 / (1 - f_i^2) \right]^{-1} = 1 + EV_w(k), \quad \text{say.}$$

If no distinction is necessary $EV(k)$ will stand for either $EV_u(k)$ or $EV_w(k)$.

In choosing k one may simply elect to minimize $EV(k)$ for the given configuration of factor loadings. This, however, ignores the fact that carrying along 10 items may be more costly than having only 5. Having only 1 item may be least expensive but having 2 or 3 is not too much more costly. Thus costs need to be considered, but the cost function may be difficult to specify. In later computations we will

suppose that the cost of y_k is $C_0 + kC_1$ in which C_0 is a fixed cost for the sub-scale and C_1 is the variable cost of adding another item. For now the cost of k items will be denoted $C(k)$.

It would appear that for k small, such as $k = 1$ or 2 , the proportional decrease in $EV(k)$ or $[EV(k) - EV(k+1)]/EV(k)$ would likely be larger than the proportional increase in cost or $[C(k+1) - C(k)]/C(k)$. The scheme for choosing k that is proposed is to increase k until these proportional changes are equal. That is, find k , call it k_{opt} , for which

$$\frac{\Delta EV(k)}{M[EV(k)]} = \frac{\Delta C(k)}{M[C(k)]} ,$$

where Δ is the difference operator and M the mean operator.

That is,

$$\Delta EV(k) = EV(k+1) - EV(k) \text{ and } M[EV(k)] = \frac{1}{2} [EV(k+1) + EV(k)] .$$

The rationale for this criterion is the following. In the testing situation one may consider two ways of improving knowledge of a subject's sub-scale general factor score. The sub-scale may be lengthened by more items or the instrument may be repeatedly administered. Although repeated administrations would not usually be free of correlations since results taken a week apart may be closer than those a month apart, the decrease in error variance for independent repetitions may follow in a rough way the function $EV(k)/n$, where n is the number of repetitions. The costs would not be exactly represented by $nC(k)$, but again this function may be a useful approximation.

One other supposition is that of "quadratic loss." That is to say that a mistake of 2 units in scoring a subject is taken to be 4 ($=2^2$) times as serious as a mistake of only 1 unit. With this assumption the worth of a score measured in utiles (or in dollars if the relation between the two is linear) is proportional to its variance.

Under these conditions one should choose to increase test length rather than repeat the administration in so far as the reduction in variance per dollar increase in cost were greater for increasing k than for increasing n . If we suppose that the functions EV and C are continuous for a k real then this condition in functional form becomes:

$$\frac{dEV(k)/dk}{dC(k)/dk} > \frac{dEV(k)/dn}{dC(k)/dn} = \frac{-EV(k)/n^2}{C(k)}$$

The interesting value of n is $n = 1$. Before considering any repetition (or $n > 1$) one should increase k until the following is satisfied:

$$\frac{EV'(k)}{EV(k)} = - \frac{C'(k)}{C(k)}$$

Going back to discrete k and finite differences we find that we have justified the original criterion.

The fact that the functions $EV(k)/n$ and $nC(k)$ do not correctly describe what happens under repetition may or may not be serious. The discrepancies are probably in off-setting directions. For example, if it were more nearly true that $EV(k)/n^\alpha$ and $n^\alpha C(k)$ reflected the dependence of variance and cost on repetitions with a value of α in the range zero to one, then the result is the same.

The criterion is also equivalent to minimizing the function:

(Constant) + log EV(k) + log C(k).

Of course neither log EV(k) nor log C(k) should be allowed to go too high but why this particular unweighted sum should be minimized is by no means clear.

Perhaps the strongest argument for the criterion is its simplicity, in that the arbitrariness in its application is reduced to just the choice of a function C(k). Having chosen the function $C_0 + C_1k$ the arbitrariness is reduced to deciding on the ratio C_0/C_1 , as will be illustrated in the example to follow. Even though an investigator may be reluctant to choose C(k) he may recognize that what one does for one sub-scale should also be done for all and the scheme allows him at least to be consistent.

If the situation were not one of testing a single subject but of estimating a group mean one may be more correct in saying that the sub-scale error variance decreases as $EV(k)/n$ and the cost may increase as $nC(k)$ where now n equals sample size. However, the variance of the estimated group mean equals $(EV(k) + \sigma_z^2)/n$ where σ_z^2 is the subject-to-subject sampling variance of Z. In this case the variance of the estimated group mean may be fairly insensitive to changes in k and a moderate value of k may be desirable.

The criterion for a value of k which should be reached before sample size should be increased is found by a similar argument to be

$$\frac{EV'(k)}{EV(k) + \sigma_z^2} = - \frac{C'(k)}{C(k)} .$$

Since the proportional changes in EV(k) are usually greater with k

small the addition of σ_z^2 has the effect of pushing k back to smaller values. When $\sigma_z^2 = 0$ we have the special case of only one subject or many subjects all with the same sub-scale score value. In practice one would use $\sigma_z^2 = 1$ if the group of subjects used to give the factor loadings was similar to those whose mean it is required to estimate.

Numerical Application

In a study conducted by Lucinda Noble of UNC at Greensboro and designed to adapt a parental attitude research instrument, the PARI¹, the factor loadings that appear in Table 1 were estimated. The required quantities for applying the scheme with the cost function, $C(k) = C_0 + kC_1$, also appear in Table 1 and the conclusions are given in Table 2.

Table 1. Factor Loadings, $EV'(k)/EV(k)$ and $C'(k)/C(k)$ for Three Cost Functions

k	Loadings	$-\Delta EV(k)/M[EV(k)]$		$\Delta C(k)/M[C(k)]$			$-\Delta EV(k)/M[EV(k)]+1$	
		Unwt'ed	Wt'ed	$C_0 = 5C_1$	$C_0 = 10C_1$	$C_0 = 30C_1$	Unwt'ed	Wt'ed
1	.72	.539	.549	.154	.087	.061	.228	.232
2	.67	.167	.216	.133	.080	.057	.055	.070
3	.56	.156	.169	.118	.074	.054	.046	.058
4	.55	.134	.138	.105	.070	.052	.036	.035
5	.54	.114	.115	.095	.065	.049	.028	.026
6	.55	.084	.089	.087	.061	.047	.019	.019
7	.50	.062	.070	.080	.057	.045	.013	.014
8	.47	-.028	.023	.074	.054	.043	-.006	.004
9	.30	-.075	.007	.070	.052	.041	-.016	.001
10	.17	-	-	-	-	-	-	-

¹E. S. Schaefer and R. O. Bell, "Development of a Parental Attitude Research Instrument," *Child Development*, 29:339-361, September 1958.

Table 2. Suggested No. of Items in Sub-Scale

Cost Function	To estimate a single subject's Z-score		To estimate a group mean Z-score	
	Unwt'ed	Wt'ed	Unwt'ed	Wt'ed
$C_0 = 5C_1$	6	6	2	2
$C_0 = 10C_1$	7	7	2	2
$C_0 = 30C_1$	7	7	2 or 3	3 or 4

With constant cost equal to 5 times the variable cost, 6 of the 10 items may be used if the unweighted score was to be used to estimate a single subject's general factor score. Upon going from 5 to 6 items the variance decreases by 11.4% and the cost increases by only 9.5% and so one would go to 6 items. However in going from 6 to 7 items the variance decreases by 8.4% while the cost rises by 8.7% so one would not take this step. Of course the optimum is probably rather broad and no great loss should occur if one deviated a bit from it.

For use of the sub-scale in estimating a group mean a somewhat reduced version of the sub-scale is called for. This reflects the fact that more energy needs to be diverted to sampling subjects and thus reducing the variance due to selection of subjects.

Looking back over the factor loadings they appear to be all on a plateau except for two at the first and two at the last. This configuration is responsible for the close agreement between the weighted and unweighted cases and the divergence of the single subject from the

group mean cases. A bit more gradual decrease in loadings would probably have led to more differences and a better appreciation of the implications of the scheme.