Socialization of children with varying levels of originality: an analysis of parent-child interaction

Virginia Mahannah Juffer

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SOCIALIZATION OF CHILDREN WITH VARYING LEVELS OF ORIGINALITY: AN ANALYSIS OF PARENT-CHILD INTERACTION.

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SOCIALIZATION OF CHILDREN WITH VARVING LEVELS OF
ORIGINALITY: AN ANALYSIS OF PARENT-CHILD INTERACTION

by

Virginia Mahannah Juffer

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Major Subject: Sociology

Approved:

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Parents and teachers, in transmitting the current socio-cultural views of the world to the child, can help both to open and to close the world for the child. Even if they mostly want to open it, they cannot help but also close it, in some ways, because there is no man who is not to a considerable extent embedded in the culture in which he grew up, the language of his culture.

In addition to the closure of the world which results from the transmission of a familial and/or cultural viewpoint, parental curbing of the child's exploratory drive can also be a factor that interferes with the world-openness of the child and often leads to a more or less powerful strengthening of the tendency to avoid the unknown and remain embedded in the familiar.

Ernest G. Schactel (47, p. 187)
INTRODUCTION

Through time and space, originality has generally been accorded a high social value. However, persons who have created original products or ideas have not always been so honored in their lifetimes as the biographies of some posthumously famous artists, writers and inventors suggest. Ghiselin (21, p. 2) pointed out that the efforts of such persons "have rarely been sustained by society, and have sometimes even been hindered...There is no way of estimating how much the development of humanity has been lamed by such delay and waste." When the social environment does not recognize originality as an outcome of the work of persons there are potentially original people who will not be encouraged to develop their abilities. The reader may cite the miserable family backgrounds of some creative persons (22) and question whether childhood and the social environment are important. However, there is an increasing body of evidence which states that social and interpersonal relations may either encourage or stifle the person's originality (14, 60). This indicates that even creative persons might have become more original had their social environment been more favorable. The acceptance or rejection of the output by the social milieu may not be as important to the development of the person's originality as the social response toward the
person himself.

The sociologist, Tumin (62), described the human being as a social person who forms a conception of himself by learning the definitions of him which are held by others. The person defines himself in terms of how he sees himself reflected by the ways in which other people relate and interact with him. Barron (5) described the more original person as possessing "a disposition toward originality" learned through responding to experiences including himself, other persons and society. Several researchers refer to the more original or creative person as marginal. Persons identified in the literature as more original have described their feelings of isolation in the general social system. Tumin (62) reasoned that the more original person, basically assured of his status, is willing to go out on his own even when it necessitates being a minority of one. He added that this is a chance few people are willing to take. Even today, the more original person has been described as different to the extent of being labeled "eccentric" and "abnormal" by some people (60).

Prior to this century originality was regarded as a hereditary gift possessed by only a few individuals rather than an ability which may be developed. Although there are still many unanswered questions, the study of originality as an area for scientific investigation at the beginning of
this century revised this conception. Originality is viewed as a general ability possessed by most people to some degree rather than as an inborn trait of a select few individuals, even though heredity may set certain restrictions. Of particular significance to this study is an awareness of the influence of the social environment to motivate and encourage the person to develop his originality as opposed to its being seen as an ability which he could do nothing about (26).

A recent trend in the research has been to study originality in terms of the individual and to determine how his originality is influenced by his relationship to other people and the general social milieu. Since 1960 there have been several publications concerned with understanding and developing originality in children. This appears to be a meaningful approach for when originality is believed to be important for the person as well as society then there is a need to understand how various social factors influence the child's originality.

Nature of the Problem

Social scientists have expressed a concern about the amount of emphasis placed upon conformity and other-directedness in America. Rogers (44) and Tumin (62) have pointed out that the contemporary American socialization
process appears to encourage conformity to the extent that originality may be hindered. In view of the concern with conformity in our society and the influence of parental socialization it is important to analyze how various parent-child interaction patterns relate to the child's originality. It appears that the greater the degree of conformity emphasized the less likely the child would have opportunities to differ from the conventional, to be able to become more original or even be motivated to develop his potential originality. The reader may find recommendations for parents to be "democratic" and "supportive" rather than "authoritarian" in order to develop children's originality. Whether such parental or educational behavior patterns are the determinants is difficult to know for there are many variables in the socialization process. Terms such as "authoritarian" are not particularly amenable to scientific investigation because they refer to broad social values which need to be operationally specified to be studied empirically.

The lack of clarity in the originality and creativity area may be because the research has been concerned with practical applications in education, government and industry. Educators such as De Mille (13) are concerned about the "creativity boom." Much of the writing is speculative and needs theoretical as well as systematic empirical in-
vestigation before decisions are made regarding conditions which foster or deter originality.

Statement of the Problem

In spite of numerous references to social factors in the psychoanalytic, psychological and educational literature there have been few studies of originality and creativity in sociology. And although there is a lack of agreement about the definitions, measures and approaches to use in studying originality and creativity there appears to be general consensus that parental factors are influential. However, the literature has focused on other facets (14) and the importance of parental factors tends to be overlooked or assumed and remains to be evaluated. To the extent that parents are the primary agents of socialization, they establish the procedures and set the early limits which would be expected to influence the child's originality.

The substantive concern of this thesis was to determine if there is, in fact, a pattern of relationships between parent-child interaction and the originality of the child. A systematic empirical investigation was believed to be necessary to determine whether certain predicted parent-child patterns relate to the child's originality as described in the literature. Most of the research relating parental factors and the child's originality has been of a speculative and
anecdotal nature rather than empirical investigations. While this study was derived from theoretical formulations and exploratory findings, it attempted a more rigorous empirical analysis of the child's originality. The focus was specifically on the parents, using some of the methods of small group research. The broad aim of the present inquiry was to narrow the gap between theoretical conjecture and empirical findings on the role of parents in influencing their child's originality.

Originality in Conceptual and Methodological Context

One of the most obvious problems in the research on originality is the lack of clarity in conceptualizing the area and specifying how the concepts are used. Even though the empirically-based research on originality is increasing many of the findings are neither comparable nor cumulative because the investigators have used different definitions, measures and studied disparate samples. Therefore, the definitions and measures of originality and the methods of research used in this area of study will be explained in the following pages before proceeding with the substantive problem.

Defining the conceptual area

Some researchers treat intelligence and creativity as mutually exclusive categories. Other researchers regard
intelligence and creativity as overlapping abilities and feel that to separate them is meaningless. An additional source of ambiguity is the differing uses of creativity and originality. To some researchers creativity and originality differ, while to others they are synonymous.

The conception used in this research views originality as an aspect of creativity existing within the broader area of intelligence. This conception is a result of the work of J. P. Guilford and his associates begun in the late 1940's. They were concerned that, while there had been speculation about creativity, there was little scientific research. Guilford and his colleagues formulated a theoretical model using factor analysis called the structure-of-intellect in which they analyzed various components of intelligence. Guilford, his associates and subsequent researchers (25, 60) have argued that intelligence may encompass more than what is measured by intelligence quotient tests. The intelligence quotient aspect of the intellect model has been described as the convergent production portion which channels thinking in terms of giving specific answers for questions. Creativity is conceived as part of the divergent production segment of the structure-of-intellect model which involves producing unusual and problem-oriented responses to various questions (27). What is germane to this study from the work of Guilford and his colleagues is the theoretical conception of
intelligence with creativity as an area which can be delimited to originality which has been defined, measured and appears amenable to small group research on parent-child interaction.

Other researchers have focused on originality as one facet of creativity rather than on creativity as a more global entity. Maltzman, Dentler and Mackler stated that creativity is too vague and have cited several advantages for studying originality rather than creativity. The one most pertinent to this study is that it is operationally more feasible to define and measure originality in a laboratory situation without concern for the other dimensions creativity entails such as societal judgment. In this study originality is defined as "the unusual and solution-oriented responses of the child in various problem-solving situations" (1, p. 9). This conception developed from the work of Guilford and Maltzman. Guilford's definition (28, p. 5) is "an individual is original in proportion to the degree of uncommonness of his responses to stimuli." Maltzman defined originality (37, p. 229) as "behavior which occurs relatively infrequently, is uncommon under given conditions, and is relevant to those conditions."

In the present study originality was distinguished from creativity in terms of the level of analysis.
Originality was the unusualness of the child's product or idea for solving a particular problem in comparison with other children in the sample (1, p. 9). Creativity included originality but was more general and depends upon how the output is received by the larger social milieu. For example, a person may produce a product or idea which is deemed original in his particular community; but, if it is not regarded as such by people outside of his group, such as the general society, then his work would not be creative. This theoretical explication of the concept of originality has been made because it is important to be aware that originality does not occur in a vacuum but within the broader social environment and is, in a sense, the starting point for creativity. Creativity in turn is viewed as one facet within the larger area of intelligence.

The distinction between originality and creativity was important to this study for several reasons. Studies of creative adults tend to be specific to given areas such as art or science. Because eminence permeates creativity it is difficult to define children in such terms since they are not likely to have achieved social recognition. Most of the research on creative children has been within this decade
and standardized norms are not available from which to generalize. And, although longitudinal studies are reported to have begun, to date there is no evidence on whether children identified as being highly original will continue to be more original when they are adults. Also of particular methodological importance, because originality is based upon comparing the individual with the other members of a specific group, the concept of originality lends itself to parent-child interaction in laboratory situations and a comparison of children with varying levels of originality. The term creativity will be used in developing the theoretical rationale for this study because most of the research has been done on creativity. However, an attempt has been made to use creativity only when it concerns the facet of creativity denoted here as originality.

**Measures for originality**

The relationship of the definitions to measures for originality is somewhat of a paradox for to develop measures a distinction must be made between more and less original people; but, some measure is needed in order to distinguish. A few researchers regard the existing measures as though they were quite reliable and valid. Methodologically, however, the creativity and originality measures are rather crude indicators which, as was true of the concepts, are used in different ways by various investigators.
Many of the originality measures have been projective techniques such as the Thematic Apperception Tests and Rorschach inkblots. However, it is difficult to interpret data from clinical techniques reliably and more objective measures are preferable for scientific investigation.

Guilford has been instrumental in developing measures for originality. He was influenced by the work of Hargreaves (30), an English psychologist, who conceived of originality, fluency and association as factors of imagination. Hargreaves' measures were unfinished pictures, inkblots and word associations scored for their infrequency.

Guilford and his workers are primarily concerned with developing open-ended creativity tests. Their most widely used measures are unusual uses, plot titles, quick responses, consequences, impossibilities and various association tests. Their procedure is to score the measures on selected facets of intelligence, creativity and originality to intercorrelate them with one another and establish factor loadings. To date the Guilford measures have primarily been used with adults.

E. Paul Torrance adopted Guilford's general conception of creativity as composed of originality, flexibility,
Torrance's measures differ from those of Guilford in that instead of developing separate measures for each dimension of creativity, his measures are scored on several creativity dimensions such as originality, flexibility, fluency and elaboration. Torrance's measures are modifications of those of Guilford, Barron and Franck, designed for studying children. The Torrance Minnesota Tests of Creative Thinking are preferable to Guilford's because they are methodologically easier to administer, score and have been intended for, as well as quite widely used, to study children. Torrance's creativity measures scored for originality were used to select the sample for this study. The Torrance measure used in this research was the Minnesota Tests of Creative Thinking (M.T.C.T.), Nonverbal Form A.

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2Originality is the ability to produce uncommon responses, unusual or unconventional associations.

Flexibility is the ability to adapt to changing instructions, to use a variety of approaches.

Fluency is the ability to produce a variety of ideas concerning possible solutions to problems.

3Elaboration is the ability to implement and build onto a basic idea.
a copy of which is located in Appendix A. The measure was
the total originality score from the Picture construction,
Incomplete figures and Repeated circle tests which will
be discussed in the Method and Procedure Chapter.

Three parent-child interaction problem-solving measures
of the child's originality, discussed more completely with
the other interaction situations in the Method and Procedure
Chapter, were also used in the present study. The interaction
originality measures were to tell a story, make a code and
construct a shelf. A copy of the interaction originality
tasks is located in Appendix B. These measures differed from
those used in most of the research on the family environment
and children's originality. The interaction measures were
based upon judging the child's originality in problem-
solving situations when interacting with his parents rather
than from paper-pencil tests given in school which would then be
related to the child's parents. The interaction situations
were designed to provide a more direct measure of the child's
originality as well as means for studying parental factors
in relation to the child's originality.

Research methods

A brief review of the methods of research used in the
literature will be made in order to show how the present
study relates to previous research on parental factors and
the child's originality. The findings on parental sociali-
zation and children's originality have generally been restricted to interview and survey methods. One of the primary methods has been retrospective accounts by adults judged by their peers to be highly original. This approach is subject to problems of memory distortion, interviewer and respondent biases. The selection of the person also may be due to social factors such as eminence rather than originality. The other research procedure has been to obtain information on child-rearing practices through questionnaire-type interviews with mothers of more and less original children. This procedure is subject to problems of social desirability, perceptual distortion or intentional inaccuracy. The weakness of this procedure was succinctly stated by Rosen and D'Andrade (45, p. 187) as follows: "It is not enough to know what parents say their child-rearing practices are; these statements should be checked against more objective data, preferably acquired under controlled experimental conditions, that would permit us to see what they do."

Straus' research (53) reported within this year, was one of the first researches based upon observing parent-child interaction in problem-solving situations.

A second problem in the literature on parental factors and children's originality has been that researchers purport to study parental socialization and only study the mother. A somewhat preferable method has been to have the mother
report the father's role. However, this approach is still subject to perceptual distortion, interviewer and respondent bias. To date, only a few researchers (53, 66) have dealt directly with both parents in their studies of parental factors and the child's originality. There is an obvious need to examine the roles of both parents in socializing the child and how these appear to influence his originality.

A third limitation in the research on parental socialization and children's originality has been that the originality measures have generally been paper-pencil tests administered in schools. Several psychologists (38, 39) have been concerned with measuring originality in various interpersonal laboratory situations; however, their subjects have not been young children. Straus' work (53) was one of the few studies reported to date which measured children's originality in a problem-solving family context.

The present study was designed to build upon and yet avoid some of the limitations in the existing research. In brief, it analyzed observed parent-child interaction, was concerned with studying both parents and measured originality in several problem-solving family situations. A comparison of the results from the semi-structured interaction situations and the more widely used paper-pencil originality measures was made to provide some indication as to how far the results may be generalized.
An examination of the literature on parental factors and children's originality shows there is need for exploratory research, a need to incorporate parental factors cited in the descriptive and speculative writing and to evaluate them systematically. An experimental study seems premature at this stage of inquiry in view of the available empirical evidence. Therefore, this study attempted a systematic observational evaluation of the relationship of selected parental socialization factors to the child's originality in problem-solving situations designed to elicit parent-child interaction as well as to measure the child's originality. Even though the study was not an experiment various controls were built into the sample in order that the problem-solving situations would permit a more rigorous examination of selected parental socialization factors. And, although this study was concerned with analyzing parental factors and the child's originality in specific hypotheses, the research was of an exploratory nature.

Objectives of the Study

The objectives of this research were the following:

1. To contribute to the growth of empirically-based research on parental socialization and children's originality by determining the influence of parental direction and support upon children's originality
2. To provide a parsimonious conceptual framework for analyzing parental direction and support and children's originality

3. To develop a composite index of children's originality based on observations of their solutions to three problem-solving tasks when they interacted with their parents in small group laboratory situations

4. To evaluate the efficacy of the paper-pencil and the problem-solving interaction measures of children's originality for testing the study hypotheses

The focus of this Chapter has been on originality in order to clarify how it will be used in the study. Originality has been used in so many different ways that an explanation of the conception, measures and methods used in the research was regarded as prerequisite in order to proceed with the substantive analysis of parental socialization patterns of children with varying levels of originality.
THEORETICAL FRAMEWORK AND HYPOTHESES

Conceptual Framework

A symbolic interaction conceptual framework was used in this study since the focus of the research was on the socialization of children with varying levels of originality within the family. Although other frameworks have been used to study socialization, symbolic interaction was selected for its focus on internal family processes and the interaction of individual family members. A symbolic interaction conception of the family may be expressed briefly in the words of Burgess (10, p. 5) who described the family as "a unity of interacting personalities." Symbolic interaction focuses on the individual through analyzing his interaction and relationships with significant others in small group situations. The interactional framework was useful in this study for its view of socialization as a continuous process, emphasis on the reciprocal influence of the interaction between family members, the influence of general societal expectations and particularly those of other family members upon the individual. A recent description of symbolic interaction (64, p. 213) as "a social psychological theory largely concerned with the cultural transformation of individual behavior" is indicative of why the interactional framework was chosen for this study of parental socialization.
and the child's originality.

The main concepts used to analyze parent-child interaction in this study were socialization, position and role. Socialization, position and role are common to other conceptual frameworks; however, their meanings differ in the respective frameworks. In structure-functionalism, the concepts are studied for their function in maintaining the family system. The situational framework uses them to study the family in relation to a specific social situation.

Definition of Concepts for Studying Parental Socialization

In this symbolic interaction study of parent-child interaction the family was viewed as a unit of interacting persons with each member occupying a particular position to which a number of roles, delineated as societal parental expectations, parental roles, parent-child role relationships and parental expectations for the child were analyzed. The concepts used to develop the study hypotheses are defined as follows.

Socialization (49) is a process of learning through which the person is prepared to meet the requirements that society sets for his behavior in various social situations. In the present study the parents as the child's "significant adults" were analyzed in terms of the influences of their directive and supportive socialization patterns upon the child's
Position (56) is used in symbolic interaction as the name given to the structural components of the family which carry shared behavioral expectations conventionally labeled "roles." Because positions invoke particular behavioral expectations they were useful designations for analyzing the actual behavior patterns of the family members, the father, mother, son and daughter, as they interacted with one another.

The concept of role was central to this study. Role, when used in a symbolic interaction approach to the family, is the behavior of family members as the occupants of given positions which develops through interacting with other family members and is influenced by social and familial expectations (46). Role was a particularly useful concept for an analysis based on interaction data because it enabled the researcher to make interpretations about the actions of the individual family actors in the family interaction settings (63). Turner pointed out that much human behavior is not mere conformity to social expectations but there is usually a certain amount of variation in how people go about fulfilling their roles. It is this aspect of variation in the symbolic interaction use of role which is useful for analyzing variations in observed parental behavioral units theorized to have influences upon the child's originality. Since role was an orienting
concept in this research, it will be explicated into the following four analytical components of social role expectation, role behavior, role relationship and parental role expectation.

**Social role expectations** (46) are the societally defined normative behavior patterns a person is expected to perform when he occupies a particular social position. In this study social role expectations were the conventional societal expectations for the parental socialization roles. Parental expectations were regarded in an ideal-type framework with the father's role purported to be primarily directive and the mother's as supportive.

**Role behavior** (46) is the actual behavior of specific persons as they take roles in interaction situations. Role behavior is synonymous with the concept of role enactment both of which focus on the overt performance of persons in various roles. The distinction between parental social role expectations and role behavior was useful in this study because the data were based on overt parent-child interaction situations. What the fathers and mothers did as the occupants of particular parental positions engaged in socializing their child could be compared with one another against the conventional societal role expectation framework.

**Role relationship** (29) is the interaction that occurs between the incumbents of two social positions. This study
was concerned with the relationships between the father, mother, son and daughter.

Role expectation (46) is the performance an actor in a particular role anticipates from the actor of a reciprocal role. It was realized that an analysis of parent-child interaction does not tap the covert aspect of parental attitudes toward socializing the child. Therefore, parental role expectations, ascertained from a questionnaire, were regarded as the implicit means by which parents socialize their child for particular roles. In this study parental role expectations were not used as societal role expectations. For the purposes of this study societal role expectations were defined in terms of the father's and mother's directive and supportive socialization roles.

Role and its subconcepts were useful for relating the two parental socialization variables of direction and support in the present study. Straus (54) pointed out that many studies of parental socialization may be organized around two basic dimensions of power and support. Power and support are two parental factors identified through factor analysis in the literature as near-universal reference axes for analyzing parental socialization (48). Parental power, control and direction have been used as synonyms by Straus and others (48, 53, 55). Direction and support were the variables used to analyze the behavior patterns of
the fathers and mothers in relation to the originality and sex of their child in this study. **Direction** was defined as "parental actions which direct, control, initiate, restrict or modify the behavior of the child." The second dimension of parental socialization **support** was "parental actions which establish, maintain or restore, as an end in itself, a positive affective relationship with the child" (1, p. 15). Direction and support have been cited in the literature as parental socialization factors which have an influence on children's creativity (53). However, although there is descriptive literature, to date, there has been little systematic empirical research on the relationship of parental direction and support to children's originality. The present inquiry was an attempt to examine the relationship from analyzing the observed parental behaviors in problem-solving interaction situations with their child.

This study also drew upon Parsons' instrumental-expressive conception which divided parental roles in a generational and sex-specific scheme (43). The instrumental-expressive framework has been used quite widely for analyzing the family cross-culturally. The rationale was that parents are socialization leaders with the father performing a primarily instrumental role relating the family to outside agencies while the mother performs some instrumental functions but is particularly oriented to providing emotional support
within the family. Parental direction and support were incorporated within the instrumental-expressive classification to provide a framework against which parental socialization and children's originality could be analyzed. For analytical purposes in this study the directive or instrumental role was assumed to center primarily in the father and the supportive or expressive role to point to the mother position.

Slater (51) questioned the universality of Parson's instrumental-expressive parental role differentiation scheme. He stated that parental differentiation in terms of an instrumental-expressive division is an optimal feature of the nuclear family which may adversely influence the personality development of the child. He believed allocating the instrumental and expressive roles to the father and mother positions to be a unidimensional approach which ignores parental salience and the personalities of the incumbents. Slater advocated a bidimensional conception of parental roles and viewing instrumental and expressive roles as independent of one another and of particular positions. Consistent with this reasoning was Bronfenbrenner's (9) discussion of the "changing American child" in which he described the father as assuming more of an affective role and the mother as becoming more important as an agent of discipline. The Slater and Bronfenbrenner discussions suggested that an instrumental-expressive classification may not be
appropriate to the contemporary American family.

In the present study the instrumental-expressive division was used as indicative of conventional parental role differences. The framework posited the roles of the parents in a conventional sex-specific manner which was likened to societal parental role expectations. Variations in parental direction and support patterns, as compared with the classification, were expected to have differing consequences upon the child's originality. In the symbolic interaction approach parents are theorized to serve as identification models for the child. The child learns parents' roles by interacting with them in his formative years. Therefore, actual parental role behavior patterns would be expected to exert a strong influence on developing or hindering the child's originality. According to the symbolic interaction theorist George H. Mead, the child is socialized by learning "to take the role of the other." Through interacting with his parents the child learns their roles, role relationships are established and he is oriented to their expectations for him.

The present study was concerned with determining the influence of the father's and mother's directive and supportive socialization patterns in relation to the child's level of originality. Parents who exhibited a clear-cut sex-role differentiation when interacting with their child were expected to influence him in terms of a conventional sex-
specific scheme. Conventional or societal parental role expectations were conceived as the father's socialization role being primarily directive and the mother's as essentially supportive.

Units of Study

The frame of reference in this study was the family composed of a father, mother and their eight-year old son or daughter. Other possible units were the marital diad and the nuclear family. However, because the focus of the research was on parent-child interaction patterns in relation to the child's originality and data collection was in terms of the parents and their child, parent-child diad and triad combinations were selected. The units of study were the father-son, father-daughter, mother-son and mother-daughter diads and the parents (father and mother) - child (son or daughter) triads.

Theoretical Rationale

The general family environment which encourages children's originality has been portrayed as one which is open and supportive. The significance of the combined influences of the father and mother as a parental unit and the parents individually will be analyzed in terms of their directive and
supportive roles, previously cited as two basic parental socialization factors, in relation to the sex and level of the child's originality.

Parental direction

Anderson (3) offered a theoretical explanation of why parents who exert a considerable amount of direction over their child seem to have less creative children. An excessive use of power in socializing the child may be conceived as an expression of parental anxiety. Such a parent is insecure in his own role and resorts to power in order to maintain his self-conceived parental image. Thus, the parent is afraid to permit the child to think and act independently. Anderson believed that when the parent does not respect or show confidence in the child, then the child is not motivated to become creative and may either revolt or submissively conform to the parent.

Getzels and Jackson (19, p. 76) found the home environment producing more creative children, following exploratory interviews of the mothers of more and less creative adolescents, to be "one in which individual divergence is permitted and risks accepted." MacKinnon (33) described various parental factors which a group of creative architects believed nurtured their creativity in childhood. The factors were possessing an extraordinary respect for the child, confidence in his ability to behave in
an approved manner and an emphasis upon the child's developing his own code of ethics. Both of these findings suggested that a non-restrictive climate is important for developing the child's originality.

In corroboration with this reasoning and more specifically in terms of parental directive behavior, Ellinger (17) found in interviewing the mothers of fourth-grade children that the highly creative children were more involved in decision-making than the less creative. The parents of the more creative children involved their children in discussions of rules of behavior more often than the parents of the less creative children. The discipline used by parents of the highly creative children was also on a more rational basis with less physical punishment than was the case with the parents of the less creative children. Straus (53, 55) analyzed the relationship of parental direction to the child's problem-solving ability in parent-child laboratory situations. He reasoned that greater parental control would tend to prevent the child from attempting to solve problems. Creativity was measured as the number of suggestions for ways to play the game offered by each family member. Therefore, creativity differed somewhat from originality as measured in this study. However, his research was of particular interest because it was based upon observed parent-child interaction patterns. Straus also found the degree of
parental control or direction to be negatively related to the child's problem-solving ability.

However, there are other findings which do not support the proposition that greater parental direction tends to lessen the child's originality. Weisberg and Springer (66) found in clinical interviews with parents and their fourth-grade child that the more creative child sought parental direction rather than making up his own mind even though the researchers had hypothesized that the more creative child would seek less parental direction. Wells (67) studied four and five-year olds and similarly predicted that parents of the more creative children would grant more autonomy to their child than the parents of the less creative children. Autonomy-granting was conceived as permitting the child independence and being less directive. However, her prediction did not hold.

In spite of some contradictory findings, the investigator expected that the parents of the more original child would permit him to engage in exploratory behavior, encourage him to work on his own and be less directive of him. In this study parental direction was hypothesized to be inversely related to independence-granting. The more directive the parents the less independence they would be expected to grant the child. While a certain amount of parental direction is necessary in structuring the socialization process it would
seem that the less directive the parents tend to be with the child, the more likely he would become independent, learn to solve problems for himself and thus have more opportunities to become original. In contrast, the more structured the child's environment the more likely he would remain dependent upon his parents and this would restrict his opportunities to become more original. Therefore, the first hypothesis was that the parents of the more original children would be less directive of their children than the parents of the less original children.

Parental support

The psychoanalyst, Greenacre (24) discussed the desirable parental relationship for developing creativity to be unconditional love without demands for special achievements. The positive warmth of the parents was believed to permit the child to identify with them and at the same time to develop his potential originality because of their belief in him and his developing self-confidence. Greenacre posited three functions either one or both parents may serve in developing creativity in the child. He or she may serve as an identification model, provide a positive environment and/or assure the child of his or her belief in the child's abilities. Rogers, the psychologist (44), viewed creativity as a social psychological process and theorized that parents, teachers or a "significant other" foster creativity by
providing a climate free of critical evaluation and developing the individual's sense of self-worth. The sociologist, Tumin (62) offered a formulation in which the person, because he is a social being, forms his self-conception through the definitions of him made by other people. The person then tries to fit his behavior to these perceived expectations. Tumin stated the capacity for and interest in one's creative self arises and is acted upon in proportion to the amount of status-assurance and security which the individual possesses.

In clinical interviews of the parents of more and less creative children Weisberg and Springer (66) found parents who were expressive and did not dominate their child had children who scored better on the criterion creativity test than children whose parents were less expressive or were dominating in their attitudes toward the child. Similarly in interviews with fourth-grade children Weisberg and Springer found the more creative children saw their parents as viewing them as people rather than things. Ellinger (17) hypothesized that a supportive home environment would encourage the development of originality in the child. However, she found after interviewing the mothers of fourth-grade children that permissiveness, loving and democratic attitudes appeared to be important for developing creativity in daughters but not for the sons.

Straus found from observations of parent-child interaction
in problem-solving situations (55) that high parental support was associated with correct solutions to problems. However, he found parental support to be negatively correlated with creativity. Although his definition of support, as positive sanctions, was similar to that used in this study, his creativity measure differed. He defined creativity in terms of ideational fluency which was based on the number of verbal suggestions made by the child for solving the problem. Verbal suggestions may have been influenced by how talkative and motivated the child was in the laboratory situation. Straus measured creativity in terms of the number of verbalized ideas. Controls were not used to determine whether the suggestions were problem-oriented. Originality was defined in the present research as the "unusual and solution-oriented response of the child in various problem-solving situations" which attempted to measure the appropriateness of the child's responses as well as their uniqueness. In terms of the measures, originality was more similar to Straus' success ratio of correct problem-solving solutions to the total number of responses than to creativity. Thus, more parental support would be expected to have a positive influence on the child's originality.

Dentler and Mackler (14) reported one of the more systematic studies on the effect of varying affective environments upon originality. By varying the nature of a test
administrator's interpersonal style in laboratory experiments with college students they found the subjects produced three times as many original responses under a "psychologically safe" condition as in the "routine, indifferent and unsafe" situations regardless of the sex of the subjects. "Psychological safety" is a clinical term meaning a nurturant, therapeutic and friendly interpersonal relationship in which the individual's self-esteem is not threatened. The interpersonal contexts varied in terms of the social manner, tone of voice, gestures and preliminary remarks made about the study by the administrator. Although these findings corroborate the rationale being developed on emotional support and its positive influence on originality one must keep in mind that the subjects were college students in a test situation with a test administrator rather than third-grade children with their parents.

In the present study parental support was defined in terms of parental praise and positive sanctions. Positive parental sanctions, which would be expected to encourage the child's originality, were such behavior patterns as praise, assistance, encouragement and support. It was realized that parents use both positive and negative sanctions in socializing their child, and that it would be a most unusual situation if parents were to use only positive sanctions. However, because of the emphasis placed upon providing a supportive
environment in the literature it was expected that parents of the more original child would employ more positive sanctions than the parents of the less original children. Parental support would provide sustenance and the support the child needs to try new and different things. Little parental support would be expected to create uncertainty in the child. A lack of parental support would not reinforce the child's developing self-confidence which he needs to attempt the unusual. The second study hypothesis was that the parents of the more original children would be more supportive of their children than the parents of the less original children.

Thus far the focus has been on the socialization influence of the parents, considered as a unit, on the child. The second area of interest in this study was an analysis of parental roles, role relationships with their child and expectations for their child. The concern in the following hypotheses will be to analyze the diadic parent-child relationship of the father and mother separately. Parental roles will focus on the father-child and mother-child directive and supportive parental relations. Parental role relationships and parental expectations will then be concerned with the father-son, father-daughter, mother-son and mother-daughter parental relationships.
Parental roles

Society determines to a great extent the roles of family members. When considering the positions of father and mother there are societal expectations in terms of who performs which socialization task. Also whether the child is a son or daughter influences the division and nature of parental socialization. Goode (23) pointed out that there is little biological basis for the sexual division of labor in the family with the exception of childbearing being restricted to women; therefore, parental roles are socially as well as biologically defined. The present study was concerned with the relations of the parents' observed socialization role behaviors to societal role expectations; that is, the father being primarily directive and the mother supportive in terms of the child's level of originality. It was expected that parents characterized by a sharp differentiation of socialization patterns would exert different influences upon their child than those who perform quite similar socialization roles. Because parents are generally the most important significant adults for the young child and may serve as identification models for him, their role behavior patterns would be expected to influence his originality. In brief, the concern was to determine the consequences of similarities or differences between the fathers' and mothers' directive and supportive socialization roles for the children's originality.
The parents of the more original children have been described as highly educated, interested in learning, as having a variety of interests and the family unit has been depicted as possessing different values from the surrounding community. The fathers have generally been in high occupational levels and in relatively autonomous decision-making positions. The mothers have often been employed outside of the home either part or full-time (19). MacKinnon (33) noted that the more creative architects' mothers had been autonomous and led active lives with interests and careers of their own. This suggested that the parents of the more original children may be less concerned about whether their behavior conforms to conventional societal expectations. The more original child's parents appeared to be independent persons who are less concerned about whether their marital, parental and family norms meet with external social approval than the parents of the less original children.

Weisberg and Springer (66) portrayed the parents of the more creative children as being autonomous, emotionally open and expressive even when there were strong differences in viewpoints. They described the more creative child's parents as not having a particularly well-adjusted marital unit in terms of how each parent viewed the marriage. The mothers accepted their maternal roles less and were more ambivalent toward the child than the mothers of the less creative children.
This may be because the more creative children's mothers had careers and were more autonomous individuals than their counterparts. These findings suggested that the more creative children's parents' roles may be less conventional. That is, the father may not be the more directive parent or the mother the more supportive.

Consistent with the preceding findings Dreyer and Wells (15) found that the more creative four and five-year olds' parents did not fit the conventional instrumental-expressive sexual dichotomy as well as did the parents of the less creative children. There was less domestic value consensus and more role tension in the more creative child's home. The more creative child's parents' reporting of more personal, marital and parental characteristics which differ from conventional norms may be related to MacKinnon's discussion that the more creative person reveals a keen self-awareness and openness to his environment. MacKinnon theorized that because of the basic self-acceptance of creative people they may speak more frankly and thus critically about themselves and other people. Although this was not a study of the originality of the parents, it was of interest to note that the parents appeared to possess some of the characteristics of more original persons which they might be expected to develop in socializing their children.

The implications of these findings about parental roles
led the writer to expect that both parents would be oriented outside as well as within the family and that the parents of the more original children are relatively autonomous persons who may impart such characteristics to their child. Thus, it would seem that either parent could be more or less directive or supportive depending upon the type of person he is, his spouse and how he and his spouse view their respective parental roles.

In relating the findings on parental roles, the child's originality and Parsons' sex-specific instrumental-expressive classification, the writer expected the directive and supportive distinctions between the fathers and mothers to be less evident in the families with the more original children. The parental roles would be less clearly delineated into the father and mother positions and the child would consequently develop a wider conception of the roles of male and female. The more original child would learn the social roles of the respective sexes; and because of the similarity of his parents' roles, his conception of sex-appropriate behavior would not be as restricted. Therefore, in hypothesis three it was hypothesized that the fathers and mothers of the more original children would be more similar in their parental socialization roles than the parents of the less original children.
Parental role relationships

Similar to the more or less directive and supportive sex-specific nature of parental socialization roles are the role relationships the fathers and mothers establish with their child. The learning of sex roles is an acknowledged complex and controversial area in the child development literature. However, this study was concerned only with the sex of the child and parents as factors in the parent-child relationships which may influence the child's originality. More specifically, this analysis of parental role relationships was concerned with determining whether the fathers and mothers of the more original boys and girls socialize their children in ways which differ from the parents of the less original children. In the present study parental role relationships were defined in terms of the proportion of directive and supportive behavior patterns each parent directed toward his or her son or daughter.

The empirical evidence on sex differences in parental socialization and the child's intellectual development is meager although differences between boys and girls have been theorized to be due to differential socialization and role expectations (31). Maccoby pointed out that the greater independence of boys and the conformity of girls appeared to be due to differences in socialization rather than genetic or physical differences. Research by Bronfenbrenner (9) on
parental socialization suggested that girls tend to receive more affection while boys encounter greater achievement demands. He described such findings as a differential optimal level of affection and authority pattern operating for the two sexes. Of importance to this study dealing with a comparison of parental socialization patterns within the middle-class is Bronfenbrenner's generalization that middle-class parental socialization is less sex-specific than in the other social classes. However, he cited socialization differences between the sexes within the middle-class which have implications for the present comparison of parental direction and support in relation to the child's sex and level of originality. Bronfenbrenner (9) stated that in the parental socialization of middle-class children, girls receive more support or "love-oriented" socialization which tends to make them somewhat dependent. He said that there is a trend within the middle-class in which boys receive almost the same amount of support as girls, and when given insufficient parental direction, they also tend to be dependent and lack initiative. Independence is one of the most frequently cited qualities described in the literature as important for the child in developing his originality. In brief, the findings from the available research indicated that parental directive and supportive socialization patterns differ for sons and daughters in ways which may influence children's
Torrance and others have described the inhibiting affects of "sex-role conditioning" upon the child's originality. Torrance (57) believed that the differential treatment of boys and girls in our society produces differences in the ways children develop their creative thinking abilities. In exploratory studies in various schools he found boys were encouraged to manipulate, explore and experiment with things more than girls. Torrance commented on several findings in his research which revealed that different socialization patterns for boys and girls may exert different influences on their originality. From the first through the third grades boys appeared to become more creative than girls on all of the Torrance creative thinking measures. Torrance reasoned that girls were inhibited by being more concerned with social pressures, peer conformity and tended to withdraw from experimenting with ideas and demonstrating them.

Contrary to Bronfenbrenner's generalization that girls tend to receive more support and boys more direction, Straus (53, 55) found the opposite relationship which is commensurate with Torrance's findings. Straus cited evidence from research on the two sexes in which girls and women tended to exhibit less resistance to group pressure, and to have lower levels of aspiration, motivation and self-esteem than males. In his study of parental socialization in terms of the sex
and creativity level of middle-class fourteen-year-olds
Straus found the parents to be equally directive of sons and daughters but to be more supportive of sons. In a measure of the child's ability to influence the behavior of the parents, sons showed greater control than daughters. Straus reasoned that the greater support and more influence of sons upon their parents than was true of daughters were factors which could be linked to sex differences and children's creativity. He posited a "socialization deficit theory" to account for the lower creativity performance of girls in which their lower scores were viewed as the outcome of role ascription and socialization for incompetence. Straus' research was done on fourteen-year-old children in Minneapolis and Bombay in problem-solving interaction situations with their parents. Girls in both societies scored lower than the boys on the creativity measures. The sex differences were also more noticeable in the Bombay sample which might be expected since the roles of the two sexes would be differentiated in a more traditional sex-specific scheme in India than in America.

Several researchers (6, 32) who have studied creative adults and children believed that more creative persons are less concerned about the sex-appropriateness of their behavior and activities than less creative persons. Torrance (60) has stated that to be creative or original requires both
sensitivity, generally regarded as feminine, and independence, traditionally thought of as a more masculine characteristic. To exemplify the influence of culturally defined sex roles Torrance cited a study of first-graders who were asked to "improve a nurse's kit so that it would be more fun to play with." Some of the boys refused to think of ideas for the task while others changed the kit into a doctor's kit and then suggested improvements (59).

In clinical interviews of fourth-graders, Weisberg and Springer found the more creative children tended to have a stronger identification with the parent of the same sex than did the less creative children. They described the parent-child role relationship as a pattern of two well-defined parent personalities with the more clearly defined personality to be the parent of the same sex as the more creative child. The parents of the more creative children tended to have a more intense relationship with the child than the less creative child and his parents (66). In his study of creative architects MacKinnon (32) found that the more creative generally identified either with both parents or with neither.

In view of the available research relating parental factors and children's originality it appeared that the sex of the parental model may not be as important as the behavior patterns the parent uses in interacting with the child which
influenced their child's originality. The more autonomous parents tend to present the child with more diversified and yet apparently effective models. An amendable conception to understanding how the parental division of the directive and supportive socialization tasks may influence the originality level of the child has been described by Winch (68). Although a clearly defined role with a limited range of variation may be easier for the child to learn, he is likely to have problems adjusting to situations in which the roles and behavioral expectations differ from those of his particular family. In contrast, while the less clearly defined roles with considerable latitude may be more difficult for the child to identify with initially, they would permit him to develop a broader understanding and subsequently avoid premature closure and adjustment problems outside of his family. When parents de-emphasize the sex-appropriateness of certain activities and interact somewhat similarly with their sons and daughters the child would be less concerned about whether his behavior is appropriately male or female. The writer expected that the more original children's parents would socialize their child in a less sex-specific manner. They would encourage him to explore a range of activities and interests without encouraging or restricting his behavior because of his particular sex. Thus, hypothesis four was that the role relationships of the fathers and mothers of the more
original children to their sons and daughters would be more similar to one another than those of the parents of the less original children to their sons and daughters.

Parental role expectations

The role expectations held by parents are the implicit means by which parents plan to modify the behavior of their children. In the present study parental expectations for the child were viewed as the roles which the parents would socialize their child to fulfill. This does not mean that the child is such a malleable creature that he will become a replica of his parent's expectations. As would be desirable, there is a certain amount of flexibility in most parent's expectations which allows for individual differences such as the child's abilities, interests and his own developing norms. It has been theorized that parental role expectations operate as the normative criteria parents use in socializing their children. Thus, role expectations should provide insight into whether parents have differing norms for their children which may influence the child to become more or less original.

The parents of highly original children have been described as autonomous persons who do not require their child to conform to their particular expectations and view the child as a person rather than a thing. That is, rather than insisting that the child meet their expectations, they allow a
certain amount of divergence and, with their guidance, the child develops his own behavioral code. Weisberg and Springer (66) found that conformity to parental values was not stressed by the parents of the more creative fourth-grade children. The more creative child's parents did not require the child to accept conventional social norms and permitted him to engage in various types of behavior. In psychological tests of the children Weisberg and Springer found the more creative used more regressive as well as mature modes of organization than the less creative children. It appears that when the parents do not restrict their child to various age and sex-specific role expectations then the child may regress at times and express himself without being afraid of engaging in socially unacceptable behavior.

Getzels and Jackson (19) found in interviewing the mothers of adolescents that the less creative group's mothers were more concerned about their children's friends and wanted them to possess such characteristics as good manners, to be studious, religious and to come from a good family with parents whose "standards are ours." The highly creative children's mothers desired less visible qualities in their child's friends such as valid sense of values, interest in something as opposed to being bored and an openness in interpersonal relations. These qualities desired in the child's friends may be conceived as projected parental role expecta-
tions which the mothers would like to see in their own children. The less creative adolescents' mothers appeared to emphasize conforming to social and parental norms and getting along with other people to a greater extent than the more creative group's mothers.

Getzels and Jackson expressed how parental role expectations may influence the child's creativity as follows: "It appears that we are dealing not only with two different types of children but with two different types of parents" (20, p. 354). Getzels and Jackson reported that the less creative adolescents' mothers were more vigilant about the child's behavior and academic performance. This group of mothers was described as being more concerned that their children were brought up "correctly" and were more critical of the child. They were also portrayed as "being less secure and at ease with themselves and the world than the mothers of the more creative adolescents" (19, p. 75).

The concern of the less creative children's parents for conforming to social norms may be related to research on conformity. People who tend to emphasize conventional, socially-approved values more than their individual judgments have been described as more authoritarian, anxious and over-controlling than more independent people (41). The value orientations of conforming individuals are primarily from external sources. In the terminology of Miller and Swanson
such parents may be described as "other-directed and bureaucratic" because they acquire their norms essentially from other people as opposed to being "inner-directed entrepreneurial" types of parents (40).

In interviewing the mothers of more and less creative fourth-graders Ellinger (17) found no differences in the mothers' expectations for good grades between creativity levels or between boys and girls. However, she found that conformity to adult role expectations was greater for girls than for boys regardless of the creativity level. She found the mothers regarded occupation-choice as more important for sons than for daughters although there was little difference between creativity levels. She also found boys were given more freedom of choice than girls. These findings are similar to the socialization deficit proposition of Straus (55) in which girls' originality appears to be hindered because they are expected to meet social expectations at an earlier age and to a greater extent than boys. The greater concern for occupational choice for the boys may similarly be related to a differing socialization process in which the choice of a career is regarded as more important for a male child because he will need to become instrumental when he is an adult whereas an occupation is not supposed to be as important for the girl.

In view of the findings on parental role expectations
the writer inferred that the role expectations of the less original children's parents would differ more from the child's actual behavior than would be true of the parents of the more original children. When strongly oriented to perceived social standards, the parents would tend to have role expectations which may be inappropriate to their child's abilities and interests. The parents may be so oriented toward conventional role expectations that they are unaware of the child as an individual. While certain parental expectations may influence the child to attain a high level of originality extremely high or low expectations would be more likely to be conceived as restrictive parental goals which may inhibit the child's originality. When parental expectations are established without regard for the child's abilities and interests they would become more difficult for him to meet.

Rogers stated that one of the most fundamental conditions for creativity is that the source of evaluative judgment be internal (44). When parental expectations are forced, the child would have difficulty resolving the differences between his abilities and/or interests and their expectations. Parental expectations which are inappropriate for the child would tend to restrict his potential opportunities to become more original. The exploratory findings and theorizing led the writer to state in hypothesis five that
the fathers' and mothers' role expectations for the more original children would be more closely related to their child's actual performance than would be true for the parents of children with less originality.

Summary of Study Hypotheses

The substantive hypotheses for this study have been concerned with analyzing parental socialization patterns observed in parent-child interaction situations in relation to the child's originality. The level of the child's originality was hypothesized to be greater when the parents were less directive; the parents were more supportive; the fathers and mothers were more similar in their parental roles; the fathers and mothers interacted similarly with their sons and daughters and when the parental expectations were closely related to the child's originality.

An assumption of the present study based on parent-child interaction patterns observed in laboratory situations was that parents' knowledge of being observed would not influence their behavior toward the child. This assumption was studied in a comparison of a situation in which the parents were not told they would be observed with the situations in which they knew they would be observed.
METHOD AND PROCEDURE

The data used in this research are part of the project, Parental Factors Related to Creativity in Children, directed by Dr. Joan Aldous of the University of Minnesota Family Study Center. The present investigator, however, is responsible for the analysis and interpretation of the present study.

Sample Selection

The selection of the family triads began with testing eight-year-old children who were selected for study because they are old enough to take tests and yet are primarily influenced by their parents (60). The first procedure used for selecting the sample was to administer the Minnesota Tests of Creative Thinking paper-pencil measure of originality to 647 third-grade children from public schools in Roseville and Minneapolis, Minnesota. Seventeen of the classrooms were in Roseville and nine in Minneapolis. Copies of the M.T.C.T. tests are located in Appendix A. While these tests are not regarded as standardized, they have been the generally-accepted criteria for research on creativity in children. The children were given ten minutes to complete each of three tests. Each child's scores on the three tests were added and the total score was used as the originality
criterion to select the sample. A brief discussion of these tests and their purposes will follow.

The first task was the **Picture Construction Test** in which the child was instructed to attach a curved piece of colored paper to a sheet of paper and incorporate it into a drawing. He was encouraged to make his picture something no one else would think of, to include details to make the drawing interesting and to title the picture. The task, when scored for originality, was designed to tap the subject's ability to think of an unusual use for something which was rather abstract, to draw and title it so that the purpose would be evident.

The **Incomplete Figures Test** contained six incomplete figures. The child was instructed to add lines to the figures and title them, again trying to think of something unusual. The task presented the child with problems in structuring and integrating. It was reasoned that those who could resist immediate closure into somewhat obvious shapes would be able to make things which are more original.

The **Repeated Circles Test** consisted of two pages of 42 blank circles one-inch in diameter. The child was directed to add lines to each circle to make a picture, label each and make things others would not think of. The task was intended to stimulate the subject to disrupt a given structure. Through repetition of the single stimulus the subject was
required to perceive it in different ways in order to create original responses. Because of the large number of circles the child had to choose whether to make more original uses of the circles or simply to use each circle without concern for how original the uses may have been.

From this group of children the second procedure used to select the sample was to eliminate children who had the following characteristics: Fathers who were craftsmen, foremen or kindred workers, operatives, in the service trades, laborers, unemployed or retired; children from broken homes or homes in which one parent was deceased; and children with I.Q. scores below 108. Thus, the resultant group of 250 children was white-collar, from complete families and with 108 I.Q. and above so that possible confounding factors of social class, family type and intelligence were controlled.

The third procedure used in selecting the sample was to make a frequency distribution of the remaining group of 250 children using the child's total originality score on the M.T.C.T. From the frequency distribution of the children's originality scores, the top 32.40 per cent, the middle 17.60 per cent and the bottom 18.00 per cent were taken as
the groups from which a further sample was drawn.¹ The greater proportion of high originality children selected was because when the information was corrected the children omitted from the population were primarily from the middle and low originality groups. The resulting 151 children divided into high, medium and low originality groups then constituted the population.

The study sample of 60 children and their parents was selected from the possible 151.² The children were selected in such a way that the I.Q. means and variances of the high, middle and low originality groups were as similar as possible in order to control for I.Q. Within these three originality groups the children were divided by sex. Twelve boys and twelve girls were selected from the top and bottom 20 per cent of the distribution of originality scores and six boys and six girls were selected from the 45 to 54 per cent of the distribution of originality scores and six boys and six girls were selected from the 45 to 54 per cent of the distribution of originality scores.

¹Due to errors in the initial information 27 children who did not fulfill these requirements remained in the population: 17 had parents in the lower occupations which were to be excluded; 4 were from broken homes and 6 were below 108 in I.Q. The initial proportions were to be 24.13% for the high originality, 18.01% for the middle and 24.34% for the low originality groups but due to coding errors the above proportions were used.

²Four of the children that were included in the sample did not meet the criteria: a high originality girl and a middle originality girl had parents in the lower occupational brackets; a middle originality girl and a low originality boy had I.Q. scores of 106.
distribution to allow for possible curvilinear relations in the data.

Each of the children and both parents were contacted by letter, a copy of which is in Appendix C, to come to the laboratory at the University of Minnesota. The refusal rate was 17 per cent which is much lower than the 50 per cent rate predicted by Campbell (11) for laboratory research. Children of the same sex, similar I.Q. and M.T.C.T. originality scores were substituted for the refusals.

Data Collection

The research plan was to examine the influence of parents on their eight-year old children who scored at differing levels on the M.T.C.T. measure of originality. This study used a systematic small group research procedure in which the interactions of the father, mother and their child were observed in five situations by observers sitting in a booth behind a window with one-way glass. The problem-solving parent-child situations developed in the project from which this study was derived were designed to analyze parental socialization factors theorized to influence the originality of the child and to measure the children's originality in interaction situations. This study was concerned with parental socialization and focused on those aspects of the interaction situations. The interaction originality measure was used as
an additional measure of originality to be compared with the more widely-used M.T.C.T. paper-pencil originality measure. Copies of the instruments used in the parent-child interaction situations are located in Appendix B.

The first situation was a laboratory Waiting Room in which the families were not supposed to be aware of being observed. The parents and child were asked to wait while the researchers, allegedly behind schedule, set up equipment in another laboratory. Objects of interest to parents as well as children such as puppets, wigs, a disguise kit, miniature army equipment and two-person games were in the room. A research assistant explained that the materials were part of a study done by a business administration group concerned with parental toy choices. To avoid the possible confounding effect of respect for the property of others the assistant returned after three minutes to say that the business administration group would not mind persons using their equipment while waiting if they put things back. After a seven-minute period the assistant returned to usher the family into another laboratory. The purpose of the Waiting Room situation was to compare the parents' behavior when not aware of being observed with when they knew they were observed. A question in the post-session questionnaire, which each parent answered, provided some indication of whether or not they were aware of being observed in the Waiting Room.
The semi-structured interactions occurred in the second laboratory and this was where the parents were told their actions would be observed. Time restrictions were not used in the interaction situations to provide an atmosphere with a minimum of temporal constraint. Wallach and Kogan (65) and others have stated that stereotyped responses are likely to come early in evaluative situations and more creative responses later on. Thus, they emphasized that if short time limits are imposed the tasks are inappropriate measures for originality.

In the second laboratory the assistant gave each family member envelopes containing instructions for the four problem-solving tasks. Then the assistant left the room to avoid the possible disturbing effect of the presence of an outsider upon the family's interactions. The families read the instructions for each task, performed it and went on to the envelope containing instructions for the next task. The order of the four tasks was counter-balanced to control for sequence-effect.

In the Story situation each member of the father-mother-child triad was to tell a story. The other members were to make comments and ask questions which would push the subject to tell the most interesting story. Each person received a list of ten words which he might choose to use or not to use. Some of the words fit into a category such as ball, bat and
diamond, but could be used in a less obvious fashion. When the family members completed their stories, they were to decide who told the best story and why. The Story situation was designed to elicit family interaction through making decisions about the order to follow in telling their stories, who told the best story and why. The Story was also used to obtain an indication of the child's originality as shown by a comparison of his story with those of other children in the sample.

For the Code the parents were given an example of a simple code such as Z could stand for A, Y for B, and so on. The parents were instructed to make a code together as an example for their child. The child was then to develop his own code and work on it until the parents felt he had done the best possible job. The Code was intended to provide an indication of the manner and extent to which the parents encouraged the child to be original as well as to provide a measure of the child's originality in comparison with the other children in the sample.

In the Puzzle situation, the parents told the child he was to construct a shelf, using his own ideas, from materials provided on a table. The materials included tiny pieces of styrofoam, a larger block of styrofoam, toothpicks, string, thumbtacks and plastic straws. Because the walls of the laboratory were of concrete block a bulletin board was
the most feasible place to attach the shelf. The task was complete when the shelf was secure enough that the child could place a small china animal on it. The purposes of the Puzzle were to elicit parental direction and support as well as to determine the child's originality in terms of his final solution as compared with the solutions of other children in the sample.

The Tantalizer was designed to determine parent-child interaction patterns which may develop when the child encountered a particularly difficult problem. The directions for the Tantalizer were given in separate instructions to the parents which they had to pool in order to set up mirror-drawing equipment and instruct their child what he was to do with the equipment. He was to remove a small ball hooked to a steel rod suspended between two small stands by looking in a mirror and using a rod-like instrument. The Tantalizer was used to measure the extent to which parents directed and/or praised their child in a situation requiring fine motor co-ordination and which was liable to frustrate the child.

Three observers were trained to classify the parent-child acts into various categories. Ten families with their eight-year old child were used in a pretest period to clarify category definitions and enable the observers to become proficient in using an electric instrument called an
Esterline Angus for recording family interaction. The observers' agreement increased from 20 per cent to more than 80 per cent in the categorization of acts in the pretest period. The Esterline Angus had a control panel with a set of buttons which were pressed to record the particular type of behavior of a given family member, to whom the behavioral unit was directed and the amount of time encompassed by the behavior. Two observers were present at each of the actual family sessions to record parent-child interaction. The research assistants did not know the M.T.C.T. originality scores of the children to avoid probable distortions due to a halo-effect.

The two observers' reliability for categorizing the interaction behavior was checked by selecting nine families at random. The per cent agreement for these families by content category was as follows: 71 per cent for positive affect, 69 per cent for praise and 70 per cent for directive behavior. The Esterline Angus tape transcribing reliability was done by randomly checking the tapes of six families. From this sample a further sample of one of the situations, the Waiting Room, Story, Code, Puzzle or Tantalizer was chosen from each Esterline Angus tape and re-transcribed. The percentage of disagreement was 2.88 per cent. The observer content category and Esterline Angus transcribing reliabilities used the following formula (8), number of agreements divided by the number of agreements plus one-half the number of disagreements.
Originality Measures

A major variable in this study was the children's originality. The Minnesota Tests of Creative Thinking, which have been the most widely used tests for measuring creativity in children, were used to select the sample. The data available on the reliability and validity of the M.T.C.T. is unfortunately meager (69) and the literature tends to be speculative and exceeds the evidence. Dentler and Mackler (14) and Mackler and Shontz (35) found some of the M.T.C.T. originality measures correlated more highly with other creativity dimensions than with originality across several measures. Mackler was concerned with the reliability of alternative tests for originality in his doctoral dissertation (34) and in subsequent research (14, p. 6) reported "an increasing dissatisfaction for the kinds of measures widely employed at present in creativity research." In making inter-test and intra-test correlations on the various dimensions of creativity Mackler and Spotts (36) stated that originality may be a characteristic of persons in relation to particular tasks, rather than a composite ability consistent across a variety of tasks. Although their research was concerned with adults the differences obtained between the various originality measures would be indicative of a problem in measuring originality.
At the present time, the measures appear to be specific to given areas of ability. For example, an individual who is original as a research chemist would be expected to score high on an originality measure dealing with physical science phenomena; however, his performance on natural or social science, literary or artistic measures of originality may be comparatively low. While the specificity of the originality measures was not the focus of this study concerned with parental socialization and children's originality, the measures used influenced the substantive findings because they were the operational measures for the study variable of originality.

In view of the little evidence available assessing the M.T.C.T. and the low correlations obtained when relating originality measures by several researchers (14, 35, 36) the criterion paper-pencil measure was regarded as provisional. Because the M.T.C.T. is relatively new and concerned with measuring one type of the child's originality it was decided to use the interaction as well as the sample criterion paper-pencil originality measure in the present study. Originality was conceived as a general ability possessed by most people in varying degrees rather than an ability of a gifted few as discussed in the Introduction Chapter. Thus, it would seem that specific originality measures for particular areas such as art or writing would not be appropriate for studying
young children. For measuring originality in children it would seem preferable to tap several ability areas to obtain a general measure of the child's originality. Even if measures were available for various areas it would be difficult to know whether an eight year-old would have developed his ability in the particular area. It would also seem desirable to use a measure concerned with assessing the child's originality in more than one area. The problem-solving interaction tasks were designed to elicit the child's originality in several situations. The Story and Code represented primarily verbal tasks and the Puzzle was essentially psychomotor. These problem-solving tasks permitted the child to display originality in performing the various tasks depending upon his own initiative and his parents' directive and supportive acts toward his actions.

In the M.T.C.T. paper-pencil tests used to select the sample for the present study originality was defined (58, p. 96) as "the ability to produce uncommon responses, unusual or unconventional associations." Originality was measured by a scale based on the frequency counts of the responses of children and the more original responses are those which have been given the least frequently\(^3\) (70, pp. 35, 45, 52)

\(^3\)The Minnesota Tests of Creative Thinking scoring procedure was based on the following samples: 223 pupils in kindergarten through sixth grade for Picture construction; 211 pupils in kindergarten through sixth grade for Incomplete figures; and 588 pupils in grades one through twelve for the Circle.
(61, pp. 12-14, 19-25, 29-31). In selecting the sample by the M.T.C.T. given in the classroom the children were classified as follows: thirty boys and thirty girls were divided into high, medium and low originality levels. The resulting groups were twelve boys and twelve girls in the high and low groups with six boys and six girls in the middle originality group. The paper-pencil originality scores ranged from five to twenty-eight and the underlying form of the distribution was bimodal because of the sample selection of the children.

The scores on the three problem-solving interaction situations, the Story, Code and Puzzle, were added together to provide a general measure of the children's originality. The intercorrelations of the individual situations and the total are reported in Appendix D. The conceptual definition of originality for the interaction situations as "the child's ability to produce uncommon and yet solution-oriented responses" (1, p. 9) was quite

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4Richard Warren. Department of Sociology, Iowa State University, Ames, Iowa. For the purposes of this thesis the three measures approximated the statistical requirement for adding them together. Private communication. 1968.
similar to the paper-pencil definition. However, the measures differed. The operational measure for the interaction tasks was "the unusual nature of the child's task solution as compared with those of other children in the sample" (1, p. 9).  

The originality of the child's Story was scored in the following manner: 0 for no story a true or copied story; 1 for a conventional or unoriginal story; 2 for a story with a twist; and 3 for a completely original story.

The child's Code was scored as follows: 0 for using the parents' code or one directly suggested by the parents; 1 for a code derived but not copied from the parents' code; 2 for a code with random or reverse letters or numbers, split halves or slip codes; and 3 for an original, reasonably elegant and different code.

The Puzzle was scored as follows: 0 for no solution or using the parents' solution; 1 for using some suggestions from parents and the child making his own additions; 2 for a regular solution thought up by the child in which the styrofoam was used as a shelf and attached to a bulletin board by toothpicks; and 3 for an original and different solution by the child.
When the interaction measure was used the sample children were divided into high, middle and low levels on the basis of their problem-solving interaction originality score. The sixty children were distributed as follows: There were twenty children in each of the three levels with twelve boys and eight girls in the high originality group and nine boys and eleven girls in the middle and low originality levels.

Because the sample children were the same in both of the measures there would be no difference in terms of the child's age, family background factors and I.Q. However, there were other differences. The interaction originality scores ranged from zero to nine and the distribution was continuous while the paper-pencil measure ranged from five to twenty-eight and the distribution was discontinuous. The interaction measure represented a more narrow distribution in which the originality levels were equal and almost equally divided by sex. Thus, the distributions of the paper-pencil and interaction measures differed considerably from one another.

Measures for Other Variables

This study was concerned with parental socialization factors as variables which may influence children's originality. Parental socialization was analyzed in terms of parental
roles, role relationships with their child and role expecta-
tions for their child. Parental roles and role relationships
were obtained from observational data from the parent-child
interaction situations and were operationally defined in terms
of the following parental socialization categories. Parental
direction and support were determined by two observers
recording the frequency of each parent's directive and
supportive acts initiated toward the child in five parent-
child interaction situations.  

Parental direction was action by the parents in which
they gave specific directions to their child, restricted
or forbid the behavior he was engaged in. Parental
direction was viewed as behavior through which the
parents structured the problem-solving situations for
the child.

Parental support in this study were the acts in which
parents praised and gave positive sanctions to the
child. Support included gestures indicating the parent
was friendly and encouraged the child. Positive parental
sanctions were praise, assistance and encouragement.

The ranges of parental directive behaviors were the
following percentages: Parents were 5.9 to 28.5; fathers were
6.5 to 30.8 and the mothers were 5.2 to 27.7. The ranges of
parental supportive behaviors were these percentages: Parents
were 1.4 to 9.5; fathers were 0 to 12.2 and mothers were
0 to 11.4.
Parental roles were defined and measured in terms of the parents' proportions of direction and support. Parental roles were analyzed as a comparison of the directive and supportive behavior patterns of the father and mother with one another in relation to the child's level of originality.

Parental role relationships, also specified in terms of the proportions of the parents' direction and support, were studied in relation to their child's level of originality and sex, that is, as a comparison of the father's and mother's role relationships with their son or daughter in terms of his or her originality. Parental role expectations were the parents' expectations for their child's performance on the interaction originality tasks. The parents rated their expectations for the child's performance in the problem-solving interaction situations on a post-session questionnaire.

Data Analysis

This study was concerned with the father's and mother's socialization of their eight-year-old child. It focused on their directive and supportive acts initiated toward the child. The directive and supportive parental socialization data were in proportions. The total of the father's and
mother's directive and supportive acts in which the child was the recipient in a given situation were divided by the total number of acts initiated by the father and mother in the particular interaction situation. Thus, the parent's directive and supportive acts initiated toward the child in the given situation were divided by the total number of acts the parent initiated, whether directed to the other parent, child, self or family. For example, the parent who showed a great deal of directive behavior with his child and initiated a large number of other acts may have had a directive value similar to a parent who showed less directive behavior with his or her child and initiated few other acts. This procedure was used to account for such possibly confounding elements as the person being reserved or overactive and to view parent-child behavior as a ratio of each parent's directive and supportive acts initiated toward the child to other possible relationships within the family triads.

When the focus was on the combined socialization influence of both parents, as in the first two study hypotheses, upon the child the father's and mother's directive or supportive proportions were computed separately and then added together.

Several statistical procedures were used in measuring the degree of relationship present in the study variables and in testing the significance of sample differences. One-tailed tests of significance were employed since the directions
of the hypotheses have been stated. Differences which showed significance at the .05 probability level were reported as "significant." Findings which did not reach this level of statistical significance, but which appeared in consistent patterns, were discussed as trends.

An arcsin transformation for proportions was done on the parent-child proportion data as a precaution for meeting the analysis of variance assumption of homogeneity of variance. Snedecor and Cochran (52, pp. 327-329) stated that the arcsin transformation improves the equality of variance for proportion data and that it may produce a change in the conclusions drawn from proportions ranging from near zero to thirty per cent. Since most of the parent-child data fell within this range the arcsin transformation was used.

The parents' directive and supportive behaviors were analyzed by using a one-way analysis of variance statistical procedure treating the children's originality levels as the main effect.

One and two-way trend or repeated measures types of analysis of variance procedures were used to analyze parental roles and role relationships (2). The father and mother were the repeated measures analyzed in relation to the children's originality levels, the sex of the children, the sex of the parents alone and in interaction with one another. Parental
directive and supportive patterns were analyzed separately but will be evaluated together since the study hypotheses are concerned with both types of behavior.

The $\chi^2$ test of homogeneity (16) was used to test the statistical significance of the correlations between the parent's expectations for their child's originality with his actual performance as judged by raters.

The $z'$ transformation (16) was used to test an assumption of the study which involved determining the significance of the difference between the correlations of the "aware" and "not aware" father's and mother's directive and supportive behaviors to the situations in which the parents were told they would be observed.

Spearman correlation coefficients were computed to analyze the interrelationship of the paper-pencil and interaction originality measures with one another and to the direction and support of the parents, fathers and mothers. Although the parental behavior patterns were interval data the originality levels were considered ordinal; therefore, the nonparametric Spearman correlation was used (50).

Summary of Chapter

The sample selected for study was sixty family triads composed of a father, mother and their eight-year-old child. The selection of the family groups began with administering
the M.T.C.T. paper-pencil originality measure to 647 children in twenty-six classrooms in the Twin Cities. Children were selected for the population who were from families in which the father's occupation was white-collar, the family was complete and the child's I.Q. was 108 or above. The next procedure was to select children from the top, middle and bottom of a frequency distribution of the M.T.C.T. scores whose I.Q. means and variances were as close as possible.

In the sample of sixty children there were twenty-four children in the high and low and twelve in the middle originality levels which were equally divided by sex to be studied with their parents. The parents of the children were contacted by letter to participate in the research which involved interacting with their child in problem-solving situations in a laboratory at the University of Minnesota. The family triads were observed in five laboratory situations using a small group interaction procedure for classifying interaction behavior patterns. Parental behavior patterns categorized as directive and supportive initiated toward the child were chosen to be analyzed in relation to the child's originality in the present inquiry.

Three of the situations were also used as an interaction measure of the child's originality. The sample children were regrouped into interaction high, middle and low originality levels. There were twenty children in each level
approximately equally divided by sex. Because of the exploratory nature of the study as well as the measures, the paper-pencil and interaction originality criteria were used to test the substantive hypotheses dealing with parental directive and supportive patterns and the child's originality. The sex of the parents and the children's sex and originality levels were the classificatory variables used for the statistical analysis of the data.
RESULTS AND DISCUSSION

An analysis of the interaction data obtained by observing sixty father-mother-child triads in problem-solving laboratory situations was made to test several hypotheses dealing with parental direction and supportive socialization patterns as they relate to children's originality. The parent-child interaction situations were designed to observe parental socialization as well as to measure the child's originality. Because of the provisional nature of the Minnesota Tests of Creative Thinking the interaction originality measure as well as the paper-pencil measure was used to test the study hypotheses. It is suggested that the reader view the following results as indicative of white-collar, intact families living in the Twin City area with an eight-year old child whose I.Q. was 108 or above because of the socio-economic and family background characteristics, the child's I.Q. and age controls built into the sample.

Tests of Hypotheses

Although the intent of the present study was not to focus on the originality measures, due to the variations between the originality measures and their provisional nature, each of the study hypotheses was evaluated in terms of the paper-pencil and the interaction measures of the children's
originality. The Minnesota Tests of Creative Thinking paper-pencil originality measure will be identified in the following thesis tables and figures as (a) and the problem-solving interaction originality measure will be denoted as (b).

In order to express the nature and amount of differences, the means of the parents' directive and supportive socialization patterns using the paper-pencil and interaction originality measures were reported in figures. The means of the parental directive and supportive patterns represent those acts of the parents, father and mother which were initiated toward their child in the interaction situations. The directive and supportive acts represent the proportion of those types of acts initiated toward the child out of all of the parents' acts observed in five interaction situations. Thus, the circles represent all of the parents' combined and/or individual parents' behavior, and the angles labeled with the proportions are their parental directive and supportive socialization patterns. Figures, as the one shown on the following page, were used to illustrate differing parental directive and supportive socialization patterns in terms of the child's level of originality and in terms of the sex of the parents and children as they relate to the children's originality levels.
Table 1a. Analysis of variance of parents' direction according to paper-pencil originality levels

<table>
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<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
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<tr>
<td>Between originality levels</td>
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<td>3.25</td>
<td>.18</td>
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<tr>
<td>Within originality levels</td>
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<td>17.89</td>
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</tr>
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</table>

Figure 1a. Mean values of parents' direction according to paper-pencil originality levels
Parental direction

The directive behavior of parents has been described in the literature as having an inhibitory influence upon children's originality. Parental direction in the present study was perceived as power or control which the parents may use in interacting with their child. Because the literature has emphasized the importance of permitting the child independence it was hypothesized that parents of the more original children would be less directive of their children than parents of the less original children.

The parents' directive behavior was analyzed in relation to the children's level of originality using the paper-pencil originality measure in the one-way analysis of variance shown in Table 1a. In terms of the paper-pencil measure the parents' directive behavior did not appear to have a significant influence on children's originality. From a comparison of the means of the parents' directive behavior in the high, middle and low levels of the children's originality, parental directive behavior was found to be somewhat greater in the more original group. This was contrary to what had been hypothesized in the study. However, because the means were close and the F value was not significant, parental directive behavior appeared to have little influence upon children's originality when originality was measured by the M.T.C.T. paper-pencil test.
However, as shown in Table 1b, parental directive behavior did have a significant influence upon children's originality when originality was measured in terms of children's total scores from several interaction situations. It appeared that the more the two parents directed the behavior of their child, as in the problem-solving laboratory situations, the less likely the child was able to develop his potential originality.

When the sample was divided into the interaction originality levels it was also meaningful to note that the difference between the means of the directive behavior of the parents of the less original group was more than twice as great as between the middle and more original groups as shown in Figure 1b. This finding also lent credence to accepting the hypothesis that the more directive the parents would be when interacting with their child the less likely he would be able to become more original.

On the basis of the two measures of originality, different results were found for testing the hypothesis that the parents of the more original children would be less directive of their children than the parents of the less original children. When using the paper-pencil originality criterion the differences obtained were not large enough to be statistically significant. In fact, the differences of the means were in conflict with the
Table 1b. Analysis of variance of parents' direction according to interaction originality levels

<table>
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<th>Source of Variation</th>
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<td>3.43*</td>
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<td>Within originality levels</td>
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<td>16.07</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.

---

Figure 1b. Mean values of parents' direction according to interaction originality levels

Originality Levels of Children

- Low (n=24)
- Middle (n=12)
- High (n=24)
direction of the hypothesis. Hence, in terms of the M.T.C.T. paper-pencil measure of originality hypothesis one was rejected. However, when the interaction originality measure was the criterion it was found that the parents of the more original children were less directive than parents of the middle and low originality groups. Greater parental direction did appear to restrict the children's originality as shown in Table 1b and Figure 1b.

Whether greater parental directive behavior tends to lower the child's originality was found to depend upon which operational measure of originality was used in this sample. The hypothesis was rejected in terms of the paper-pencil measure and in terms of the interaction measure it reached statistical significance at the .05 level and was accepted. In brief, hypothesis one which predicted that the parents of the more original children would be less directive of their children than the parents of the less original children could only be accepted when the children's originality was based upon the interaction problem-solving measure.

Parental support

It was hypothesized that the more support the parents provided their child the more likely the child would be more original. When using the paper-pencil measure of originality, as shown in Table 2a, it was found that parental support did not appear to influence children's originality. The F ratio
Table 2a. Analysis of variance of parents' support according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among originality levels</td>
<td>2</td>
<td>.40</td>
<td>.06</td>
</tr>
<tr>
<td>Within originality levels</td>
<td>57</td>
<td>7.93</td>
<td></td>
</tr>
</tbody>
</table>

Parents

- Low (n=24)
- Middle (n=12)
- High (n=24)

Figure 2a. Mean values of parents' support according to paper-pencil originality levels
was clearly nonsignificant. In a comparison of the parental support means between originality levels, Figure 2a, the values were so similar that there was no perceptible influence of parental support upon the children's originality.

When the interaction originality measure was used, Table 2b, it was also found that parental support did not appear to influence children's originality. When the parental support means were compared between the interaction originality levels, shown in Figure 2b, as was true with the paper-pencil originality measure, there was no consistent trend.

In view of the lack of statistical significance and absence of consistent trends between the means of the parents' supportive behavior and children's originality levels when using either the paper-pencil or interaction originality measure the study hypothesis must be rejected. Thus, in terms of the findings from analysis of the data it was not found that the parents of the more original children were more supportive of their children than the parents of the less original groups and study hypothesis two was not accepted.

A possible explanation for why parental support did not appear to influence the children's originality may be due to the laboratory measure of support. It seems reasonable that it would be difficult for outside observers to be sensitive
Table 2b. Analysis of variance of parents' support according to interaction originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among originality levels</td>
<td>2</td>
<td>3.78</td>
<td>.49</td>
</tr>
<tr>
<td>Within originality levels</td>
<td>57</td>
<td>7.78</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2b. Mean values of parents' support according to interaction originality levels
enough to the various families to determine when parental support was being used. Consequently when only a small amount of support was evident it did not appear to influence the children's originality in this sample. Straus (53, 55) also encountered difficulties in measuring support in his parent-child interaction research. Of the two parental socialization patterns analyzed in this study support would seem to be a more subtle relationship than direction in direct observations from laboratory situations.

The focus of hypotheses three, four and five will shift from the combined influence of the parents to the influence of the father and mother, considered together yet on an individual basis, upon children's originality. The subsequent hypotheses will be concerned with parental roles, role relationships with the child and expectations for the child.

To analyze the influence of the father and mother in hypotheses three and four a trend on repeated measures analysis of variance statistical design was used in which the fathers' and mothers' socialization patterns were the treatments which the children in the high, middle and low originality groups received in the parent-child interaction situations.
Parental roles

Hypothesis three was analyzed using a one-way (2) repeated measures analysis of variance statistical procedure. It was hypothesized that the parents of the more original children would be more similar to one another in their parental roles than the parents of the less original children. To test this hypothesis the paper-pencil and interaction originality measures were used to analyze the fathers' and mothers' directive and supportive socialization patterns.

When the paper-pencil originality criterion was used to analyze parental direction the children's high, middle and low originality levels were found not to be significantly different from one another as shown in Table 3a. This nonsignificance indicated that the fathers' and mothers' directive behavior did not differ significantly between the three originality levels.

In a comparison of the parents' directive behavior, the B value in Table 3a, the value was found to be statistically significant. That is, the fathers' and mothers' directive behaviors were significantly different from one another over the three originality levels. The differences were also evident when the means of the fathers and mothers
Table 3al. Analysis of variance of parents' direction according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>1.405</td>
<td>.020</td>
</tr>
<tr>
<td>Error (a)</td>
<td>57</td>
<td>70.717</td>
<td></td>
</tr>
<tr>
<td>B: Father and mother</td>
<td>1</td>
<td>146.734</td>
<td>4.185*</td>
</tr>
<tr>
<td>AXB: Originality levels X father and mother</td>
<td>2</td>
<td>7.683</td>
<td>.219</td>
</tr>
<tr>
<td>Error (b)</td>
<td>57</td>
<td>35.060</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
Table 3a2. Analysis of variance of parents' support according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>5.134</td>
<td>.144</td>
</tr>
<tr>
<td>Error (a)</td>
<td>57</td>
<td>35.588</td>
<td></td>
</tr>
<tr>
<td>B: Father and mother</td>
<td>1</td>
<td>3.309</td>
<td>.160</td>
</tr>
<tr>
<td>AXB: Originality levels x father and mother</td>
<td>2</td>
<td>101.707</td>
<td>4.946*</td>
</tr>
<tr>
<td>Error (b)</td>
<td>57</td>
<td>20.563</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
Figure 3a. Mean values of parents' direction and support according to paper-pencil originality levels
Graph 1. Mean values of parents' direction and support according to paper-pencil originality levels
were compared in Figure 3a and Graph 1. The father's directive behavior differs significantly from that of the mother with the father being the more directive parent.

When the interaction of the children's originality levels and the fathers' and mothers' directive behavior were analyzed there was no significant difference. The directive behaviors of the father and mother did not appear to differ between the originality levels. And, as shown in Graph 1, the directive differences between the father and mother were quite similar in the respective originality groups. Thus, in terms of the directive aspect of hypothesis three, the differences between the fathers and mothers of the children with varying levels of originality did not represent significant differences. The father appeared to be the more directive parent regardless of the child's originality level.

Therefore, when the paper-pencil measure was used to study the directive aspect of parental roles, the data in the present study failed to support the hypothesis that the parents of the more original children would be more similar in their directive roles than the parents of the less original children.

The results of an analysis of the parents' support roles, continuing with the paper-pencil originality criterion, are shown in Graph 1. The three originality
levels did not differ significantly from one another in terms of the parents' supportive behavior. The difference between the parents' supportive patterns was also found to be a nonsignificant value. However, the statistical interaction of the paper-pencil originality levels and the supportive behaviors of the fathers and mothers was statistically significant. When the means of the fathers' and mothers' support by the originality levels of the children are compared in Graph 1 the differences become more apparent. The more support the father exhibited when interacting with the child the more original the child. The reverse situation was true for the mother. The less support the mother provided, the higher the child's level of originality appeared to be.

When viewing the data in terms of hypothesis three, the results did not support the hypothesis. It had been expected that the amount of support provided by the more original children's parents would be more similar to one another than for the middle and less original children's parents. When the relationship of the fathers' and mothers' support to the children's originality tend to be inversely related to one another, as shown in Table 6 page 122 and in Graph 1, then the differences between the two parents' supportive patterns would not substantiate the study hypothesis. In fact, the supportive difference between the father and mother of the more original children was greater than that of the less
original children's parents. Thus, the analysis of parental support and children's originality when based on the paper-pencil measure did not support hypothesis three.

The results of the interaction measure of the children's originality when hypothesis three was analyzed are shown in Table 3b1. The high, middle and low originality levels of the children were found to differ significantly in terms of the directive behavior of the father and mother when the interaction originality measure was used. Also, the directive behaviors of the father and mother were found to differ significantly between one another. The father was more directive than the mother at each of the levels of originality. When the statistical interaction of the children's originality levels and the parents' directive behavior was analyzed the value was not significant. Graph 2 shows that there was little interaction between the originality levels and the parents' directive behavior. The fathers and mothers of the more original children were less directive of their children than the parents of the less original children. However, when the differences between the parents' directive behavior were analyzed in terms of the children's originality levels, the differences were greater for the parents of the more original children. There was a trend between the originality levels in which the directive differences were greater between the parents of the more original children than
Table 3bl. Analysis of variance of parents' direction according to interaction originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality level</td>
<td>2</td>
<td>278.230</td>
<td>4.561*</td>
</tr>
<tr>
<td>Error (a)</td>
<td>57</td>
<td>61.004</td>
<td></td>
</tr>
<tr>
<td>B: Father and mother</td>
<td>1</td>
<td>146.734</td>
<td>4.342*</td>
</tr>
<tr>
<td>AXB: Originality levels X father and mother</td>
<td>2</td>
<td>43.768</td>
<td>1.295</td>
</tr>
<tr>
<td>Error (b)</td>
<td>57</td>
<td>33.793</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at .05 level.
Table 3b2. Analysis of variance of parents' support according to interaction originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error (a)</td>
<td>57</td>
<td>35.470</td>
<td></td>
</tr>
<tr>
<td>B: Father and mother</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error (b)</td>
<td>57</td>
<td>23.828</td>
<td></td>
</tr>
<tr>
<td>AXB: Originality levels X father and mother</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error (a)</td>
<td>57</td>
<td>35.470</td>
<td></td>
</tr>
<tr>
<td>Error (b)</td>
<td>57</td>
<td>23.828</td>
<td></td>
</tr>
</tbody>
</table>
Figure 3b. Mean values of parents' direction and support according to interaction originality levels.
Graph 2. Mean values of parents' direction and support according to interaction originality levels.
for the middle and less original children's parents. Thus, the data did not support hypothesis three which posited that the parents of the more original children would be more similar in their directive roles than the parents of the less original children when originality was based on the interaction measure.

The fathers' and mothers' supportive patterns were then analyzed using the interaction originality criterion. Table 3b2 shows that the originality levels of the children did not differ significantly in terms of the supportive behaviors of the fathers and mothers. The supportive behavior of the fathers and mothers also did not differ significantly from one another. When the statistical interaction of the children's originality levels and the parents' supportive behaviors was tested it was found to be not significant.

The results of the analysis of the parents' support when the interaction measure was used in terms of the children's originality are shown in Figures 3b and Graph 2. The supportive behavior of all of the parents was very similar. The fathers of children in the high and middle originality levels tended to be more supportive than the mothers with the mothers being the more supportive parent in the low originality level. The supportive patterns of the less original children's parents appeared to be more conventional
with the mother providing more support than the father while
the reverse was the case in the middle and high originality
levels.

In summary, when parental direction and support were
analyzed in terms of the paper-pencil and interaction
measures of originality it was found that the
father was the more directive parent regardless of the
originality level of the children. In terms of parental
support, the more supportive the father the more original
the children appeared to be. Weisberg and Springer (66)
found a similar relationship from clinical interviews in
which the fathers of the high creative children tended to
have a more positive relationship with the child than did
the mothers, while the reverse was true with the less
creative children. These findings suggested that the amount
of support provided by the father may be more important than
has generally been reported in the literature.

However, the mothers' support was less clear-cut using
either of the two originality measures. When the paper-
pencil measure was used the mothers of the more original
children provided the least support which was not the case
when the interaction criterion was used. The mothers of the
more original children appeared to use slightly more support
when interacting with their child than the mothers of the
less original children when the interaction originality measure
was used.

When the data were viewed in relation to the instrumental-expressive socialization framework it appeared that the father was the more directive parent at each of the originality levels. The directive differences between the two parents were hypothesized to be less for the more original children's parents. However, this was not found to be the case when either originality measure was used. In terms of parental support the parents' roles were less obvious. When the paper-pencil criterion was used there was a significant interaction between the parents' support and the child's originality levels. In general the children's originality was higher when the father was more supportive and the mother was less supportive. This is somewhat in agreement with the reasoning that the parents of the more original children would be less conventional with the mother assuming the major supportive role. However in terms of the similarity of the fathers and mothers roles, as was true of parental direction it was found that the supportive roles of the parents of the more original children were no more closely related than those of the less original children's parents. There were significant findings and trends which showed that the parents of the more original children were less conventional than their counterparts. The most obvious was that the fathers of the more original children appeared to use the same and more
support when interacting with their children than the mothers. However, because the study hypothesis was concerned with the similarity of the parents' directive and supportive roles it seemed to overlook some of the other relationships. It was hypothesized that the parents of the more original children would be more similar to one another in their parental directive and supportive roles. Neither parental socialization role using either the paper-pencil or interaction originality measure was more closely related between the parents of the more original children than the less original children's parents. Therefore, hypothesis three was rejected.

Parental role relationships

In hypothesis four it was expected that the role relationships of the father and mother of the more original children to their sons and daughters would be more similar than those of the parents of the less original children to their sons and daughters. Parental role relationships were the fathers' and mothers' directive and supportive socialization patterns which were analyzed in relation to the sex and originality levels of the children.

When the paper-pencil originality measure was used it was found that there was a significant difference between the sex of the children in terms of the parents' directive behaviors. In a comparison of sons and daughters it was found
that parents were more directive of daughters than of sons at each level of originality. The directive differences of the parents for sons and daughters was statistically significant as shown in Figure 4a and Graph 3.

It was hypothesized that the parents of the more original children would use similar amounts of direction with their sons and daughters and that the parents of the less original children would use quite different amounts of direction. However, it was found that the parents at each originality level provided approximately the same amount of direction for their sons. In terms of the daughters the greatest directive difference was between the parents of the middle originality group. In the high and low levels of daughters the parents were very similar with the fathers slightly more directive than the mothers.

In the statistical interaction tests of these variables it was found that there were no significant differences between the originality levels, sex of children and parents' directive behaviors. As shown in Graph 3 there was little statistical interaction between the children's originality levels in terms of the parent's directive behaviors particularly for the sons. Therefore, in terms of the paper-pencil originality criterion, the study hypothesis that the parental directive behaviors of the parents of the more original children would be more closely related to one another was
Table 4a1. Analysis of variance of parents' direction and sex of child according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>1.404</td>
<td>.020</td>
</tr>
<tr>
<td>B: Son and daughter</td>
<td>1</td>
<td>278.340</td>
<td>4.030*</td>
</tr>
<tr>
<td>AXB: Originality levels X son and daughter</td>
<td>2</td>
<td>11.620</td>
<td>.168</td>
</tr>
<tr>
<td>Error (a)</td>
<td>54</td>
<td>69.061</td>
<td></td>
</tr>
<tr>
<td>C: Father and mother</td>
<td>1</td>
<td>146.734</td>
<td>4.016*</td>
</tr>
<tr>
<td>AXC: Originality levels X father and mother</td>
<td>2</td>
<td>7.683</td>
<td>.210</td>
</tr>
<tr>
<td>BXC: Son and daughter X father and mother</td>
<td>1</td>
<td>11.310</td>
<td>.310</td>
</tr>
<tr>
<td>AXBXC: Originality levels X son and daughter X father and mother</td>
<td>2</td>
<td>6.953</td>
<td>.190</td>
</tr>
<tr>
<td>Error (b)</td>
<td>54</td>
<td>36.540</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
Table 4a2. Analysis of variance of parents' support and sex of child according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>5.134</td>
<td>.153</td>
</tr>
<tr>
<td>B: Son and daughter</td>
<td>1</td>
<td>78.410</td>
<td>2.336</td>
</tr>
<tr>
<td>AXB: Originality levels X son and daughter</td>
<td>2</td>
<td>68.806</td>
<td>2.050</td>
</tr>
<tr>
<td>Error (a)</td>
<td>54</td>
<td>33.565</td>
<td></td>
</tr>
<tr>
<td>C: Father and mother</td>
<td>1</td>
<td>3.309</td>
<td>.164</td>
</tr>
<tr>
<td>AXC: Originality levels X father and mother</td>
<td>2</td>
<td>101.707</td>
<td>5.034**</td>
</tr>
<tr>
<td>BXC: Son and daughter X father and mother</td>
<td>1</td>
<td>52.285</td>
<td>2.588</td>
</tr>
<tr>
<td>AXBXC: Originality levels X son and daughter X father and mother</td>
<td>2</td>
<td>14.399</td>
<td>.713</td>
</tr>
<tr>
<td>Error (b)</td>
<td>54</td>
<td>20.204</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at .01 level.
Figure 4a. Mean values of parents' direction and support and sex of child according to paper-pencil originality levels
Graph 3. Mean values of parents' direction and support and sex of child according to paper-pencil originality levels.
not supported by the data.

When parental supportive role relationships were analyzed it was found that there were no statistically significant differences between the children's originality levels, the sex of the children or between the two parents. Of the four interaction combinations of these variables the children's originality levels by the fathers' and mothers' supportive behaviors was the only statistical interaction which was statistically significant. The fathers were more supportive than the mothers of sons and daughters in the high originality level. For the less original sons the mothers were more supportive than fathers. In terms of the other two levels of daughters the father was the more supportive parent for the middle level while the parental supportive patterns were similar to one another in the low originality group of daughters. Thus when originality was measured in terms of the paper-pencil criterion, the findings did not substantiate the hypothesis that the fathers and mothers supportive role relationships with their sons and daughters would be more similar than the less original children's parent-child relations.

The results of the parent's directive role relations with their sons and daughters in terms of the interaction originality measure were summarized in Table 4b1. The high, middle and low originality levels of the children
Table 4b1. Analysis of variance of parents' direction and sex of child according to interaction originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>241.887</td>
<td>4.010*</td>
</tr>
<tr>
<td>B: Son and daughter</td>
<td>1</td>
<td>278.340</td>
<td>4.614*</td>
</tr>
<tr>
<td>AXB: Originality levels X son and daughter</td>
<td>2</td>
<td>7.146</td>
<td>.118</td>
</tr>
<tr>
<td>Error (a)</td>
<td>54</td>
<td>60.320</td>
<td></td>
</tr>
<tr>
<td>C: Father and mother</td>
<td>1</td>
<td>146.734</td>
<td>4.441*</td>
</tr>
<tr>
<td>AXC: Originality levels X father and mother</td>
<td>2</td>
<td>40.338</td>
<td>1.221</td>
</tr>
<tr>
<td>BXC: Son and daughter X father and mother</td>
<td>1</td>
<td>11.310</td>
<td>.342</td>
</tr>
<tr>
<td>AXBXC: Originality levels X son and daughter X father and mother</td>
<td>2</td>
<td>68.730</td>
<td>2.080</td>
</tr>
<tr>
<td>Error (b)</td>
<td>54</td>
<td>33.043</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
Table 4b2. Analysis of variance of parents' support and sex of child according to interaction originality levels

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Originality levels</td>
<td>2</td>
<td>7.719</td>
<td>.220</td>
</tr>
<tr>
<td>B: Son and daughter</td>
<td>1</td>
<td>78.410</td>
<td>2.234</td>
</tr>
<tr>
<td>AXB: Originality levels X son and daughter</td>
<td>2</td>
<td>24.871</td>
<td>.709</td>
</tr>
<tr>
<td>Error (a)</td>
<td>54</td>
<td>35.096</td>
<td></td>
</tr>
<tr>
<td>C: Father and mother</td>
<td>1</td>
<td>3.309</td>
<td>.137</td>
</tr>
<tr>
<td>AXC: Originality levels X father and mother</td>
<td>2</td>
<td>8.691</td>
<td>.360</td>
</tr>
<tr>
<td>BXC: Son and daughter X father and mother</td>
<td>1</td>
<td>52.285</td>
<td>2.166</td>
</tr>
<tr>
<td>AXBXC: Originality levels X son and daughter X father and mother</td>
<td>2</td>
<td>1.151</td>
<td>.048</td>
</tr>
<tr>
<td>Error (b)</td>
<td>54</td>
<td>24.140</td>
<td></td>
</tr>
</tbody>
</table>
Figure 4b. Mean values of parents' direction and support and sex of child according to interaction originality levels.
Graph 4. Mean values of parents' direction and support and sex of child according to interaction originality levels.
differed significantly in terms of the parents' directive behavior. The more original children's fathers and mothers were less directive as shown in Graph 4 with the exception of the fathers of the middle originality group of daughters. Parents were found to be more directive of daughters than of sons as shown in Table 4b1. The difference was statistically significant and consonant with the findings of Straus (53, 55). However, the interaction of the children's originality levels and sex was not statistically significant. The difference between the fathers' and mothers' directive behavior was statistically significant. The general trends shown in Graph 4 depict the fathers as more directive than the mothers. The less original sons and middle originality level of daughters were exceptions to the trends with the mother as the more directive parent in these groups.

None of the statistical interactions of the children's originality levels, sex and the sex of the parents was statistically significant.

When parental support roles were analyzed the originality levels, sex of the children and the fathers and mother support patterns were found not to be statistically significant when examined individually and in combination with one another. From a comparison of parental support in the originality levels in Figure 4b and Graph 4 there were some trends. The
sex of the children was the most nearly significant relationship in this analysis. The reason for the difference may be seen in Graph 4. The amounts of support were very similar for sons and daughters with the sons receiving somewhat more support than daughters. The most apparent difference was in the slopes of the lines between the fathers' and mothers' support. Sons appeared to receive less support from fathers and more from their mothers while daughters received more support from their fathers and less from the mothers. These trends existed in all of the originality levels except the middle originality group of sons who received the same amount of support from their fathers as from the mothers. When comparing both originality measures and the role relationships the fathers tended to be more directive and supportive than mothers particularly of daughters. However, because the originality levels, fathers' and mothers' support alone and in interaction with the sex of the children were not statistically significant the writer was cautious in relating possible reasons for the near-significant difference between the sons and daughters in terms of the parents' supportive role relationships.

From the outcomes of the variables tested in Table 4b2 it was concluded that there were no statistically significant differences between the supportive role relationships of the more original children's parents and the parents of the less
original children's parents and the parents of the less original children when the interaction criterion of originality was used. Hypothesis four which predicted that the directive and supportive role relationships of the fathers and mothers of the more original children would be more similar to one another and to their sons and daughters was not substantiated when either the paper-pencil or the interaction measure was used and therefore was not accepted.

Although the study hypothesis was not accepted there were related findings of importance which were statistically significant. The fathers tended to be more directive of both sons and daughters than mothers regardless of the children's originality. This finding differed somewhat from Straus' analysis of sex differences in parent-child problem-solving interaction situations in which fathers tended to be more directive of sons and mothers were more directive of daughters. Variations in parental socialization discussed by Bronfenbrenner are quite similar to these findings. Bronfenbrenner (9) described parental socialization "risks" which differ for boys and girls within the middle-class. Specifically in terms of the sex of the parents and children he noted that fathers tend to be more strict with sons and mothers with daughters. This generalization was in agreement with Straus' findings but the father was the more directive parent of sons and daughters in the present study. The other
trend Bronfenbrenner discussed which was found in this study was that each parent was more indulgent with a child of the opposite sex. In the present study it was found that fathers were generally more supportive of daughters and mothers tended to be more supportive of sons although these trends were not statistically significant using either originality criterion.

In terms of the sex of the children it was found that sons were given less parental direction and tended to receive more parental support than daughters. This was quite similar to Straus' finding that fathers and mothers tended to be more controlling and less supportive of daughters than of sons.

In summarizing the findings from the preceding two hypotheses dealing with parental roles and role relationships with their children the following generalizations will be made. The fathers' roles appeared to be primarily directive or instrumental regardless of the children's levels of originality. Although the fathers supportive roles were less clearly delineated into the conventional parental division, the alignment was not significant in terms of the children's levels of originality as had been hypothesized. Rather than the roles of the parents of the more original children being more similar to one another they were found to be as dissimilar as the parents of the middle and less original
groups of children. In terms of the fathers' and mothers' role relationships with their sons and daughters it appeared that their directive and supportive socialization patterns were no more similar to their sons and daughters in the more original group of children than for the less original groups. The differences between the directive and supportive patterns appeared to be more related to the sex of the parent and child rather than to the child's level of originality.

**Parental role expectations**

In hypothesis five it was stated that the expectations of the fathers and mothers of the more original children would be more closely related to their child's actual performance than the parental expectations of the parents of the less original children. It was reasoned that the parents of the less original child would be likely to place high expectations upon their child and the high expectations would tend to have a negative influence upon the child's originality.

The $\chi^2$ test of homogeneity was used to evaluate the correlations obtained between the fathers' and mothers' expectations for how well they thought their child would perform on the interaction originality situations with the child's performance score as judged by two raters. The data were analyzed in terms of the sex of the parents and child in relation to the child's level of originality.

When the M.T.C.T. paper-pencil originality criterion
was used the results were as shown in Table 5a. The calculated $\chi^2$ value were significant at the .01 level which indicated that the correlations were not homogeneous. When looking at the direction and magnitude of the correlations it becomes apparent that the parents of the more original children had lower expectations for their children while the parents of the less original children had greater expectations for their children.

In general the fathers' expectations were more closely related to the children's performance than those of the mothers' with the exception of the fathers of the middle originality group of daughters. This suggested that the fathers may have been more objective or more aware of their child's strengths and limitations and gear their expectations accordingly whereas the mothers may have been more subjective or less aware of their child's abilities.

In a comparison of the sons and daughters, the expectations of both the father and mother for the daughters appeared to be less than those for the sons. The negative values for the more original daughters were greater and those for the less original daughters were less than the correlations for the sons of the comparable groups. These findings may be indicative of differing parental socialization expectations which appeared to be more related to the sex of the child than in terms of their originality levels.
Table 5a. \( \chi^2 \) test of homogeneity of correlations for parents' expectations for child's originality by sex of parent and child according to paper-pencil originality levels

<table>
<thead>
<tr>
<th>Parent, Child and Originality Groups</th>
<th>n</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sons:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>-.329</td>
</tr>
<tr>
<td>Middle originality</td>
<td>6</td>
<td>+.026</td>
</tr>
<tr>
<td>Low originality</td>
<td>12</td>
<td>-.483</td>
</tr>
<tr>
<td>Daughters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>-.723</td>
</tr>
<tr>
<td>Middle originality</td>
<td>6</td>
<td>-.139</td>
</tr>
<tr>
<td>Low originality</td>
<td>12</td>
<td>+.667</td>
</tr>
<tr>
<td>Mothers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sons:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>-.663</td>
</tr>
<tr>
<td>Middle originality</td>
<td>6</td>
<td>-.757</td>
</tr>
<tr>
<td>Low originality</td>
<td>12</td>
<td>-.520</td>
</tr>
<tr>
<td>Daughters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>-.820</td>
</tr>
<tr>
<td>Middle originality</td>
<td>6</td>
<td>-.127</td>
</tr>
<tr>
<td>Low originality</td>
<td>12</td>
<td>-.044</td>
</tr>
</tbody>
</table>

\[ \chi^2 \] for Fathers = 149.675\** \[ \chi^2 \] for Mothers = 179.489\**

\*\* Significant at .01 level.

The implications of these trends may be that because of differing expectations males may be encouraged to develop their abilities in various areas whereas females are not.

In brief, hypothesis five which posited that the role expectations of the fathers and mothers of the more original children would be more closely related to their child's actual performance than the parents of children with less originality
was not accepted. Even though the $\chi^2$ values were significant, the closeness of the correlations of parental expectations to the child's performance appeared to be more related to the sex of the child and his parents than to the child's level of originality when originality was based upon a paper-pencil measure.

When the children's originality levels were delineated in terms of the interaction originality measure the results for hypothesis five were as shown in Table 5b. The $\chi^2$ values were significant and it was concluded that the correlations were not homogeneous as was the case with the paper-pencil originality measure.

In terms of the interaction originality levels the expectations of the parents of the more original children were more closely related to their child's performance than was true of the middle and less original children's parents. An exception to this finding was the mothers' expectations for the more original daughters which was negatively correlated with the high originality level while the middle group was not correlated and the low originality group of daughters was positive.

The fathers' expectations for the more original sons and daughters were positive while the mothers' expectations were negative values. Thus, the fathers' expectations for the more original children were more closely related to
Table 5b. \( \chi^2 \) test of homogeneity of correlations for parents' expectations for child's originality by sex of parent and child according to interaction originality levels

<table>
<thead>
<tr>
<th>Parent, Child and Originality Groups</th>
<th>n</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fathers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sons:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>+.207</td>
</tr>
<tr>
<td>Middle originality</td>
<td>9</td>
<td>+.218</td>
</tr>
<tr>
<td>Low originality</td>
<td>9</td>
<td>-.668</td>
</tr>
<tr>
<td>Daughters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>8</td>
<td>+.136</td>
</tr>
<tr>
<td>Middle originality</td>
<td>11</td>
<td>-.454</td>
</tr>
<tr>
<td>Low originality</td>
<td>11</td>
<td>-.114</td>
</tr>
<tr>
<td><strong>Mothers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sons:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>12</td>
<td>-.148</td>
</tr>
<tr>
<td>Middle originality</td>
<td>9</td>
<td>+.286</td>
</tr>
<tr>
<td>Low originality</td>
<td>9</td>
<td>-.515</td>
</tr>
<tr>
<td>Daughters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High originality</td>
<td>8</td>
<td>-.162</td>
</tr>
<tr>
<td>Middle originality</td>
<td>11</td>
<td>.000</td>
</tr>
<tr>
<td>Low originality</td>
<td>11</td>
<td>+.414</td>
</tr>
</tbody>
</table>

\( \chi^2 \) for Fathers = 44.932** \( \chi^2 \) for Mothers = 29.783**

**Significant at .01 level.

The children's performance than those of the mothers. The correlations between the fathers' and mothers' expectations for the other two originality levels did not yield a consistent pattern.

The expectations of the fathers and mothers of the middle and less original groups of sons was considerably greater than for the daughters of the comparable levels. This was most noticeable in the less original group and was also
found to be the case when the paper-pencil originality levels were used.

In summary, the fathers' and mothers' expectations for the more original children were generally more closely related to the children's actual performance than was true for the parents of the less original children when the interaction originality criterion was used. However, because this was not true when the paper-pencil originality measure was used hypothesis five could only be accepted in terms of the interaction originality measure. The outcomes of using the paper-pencil and interaction originality criteria were quite amenable to Straus' socialization deficit theory (55) in which females were not expected to develop their abilities in various areas to as great an extent as males. Both parents at each of the originality levels appeared to inculcate lower expectations for their daughters which would be expected to lower the girl's initial desires to learn. Parental expectations may be conceived as the goals which parents encourage their child to attempt. When parents have low expectations for their child it would be assumed that these parents would not motivate the child and this would consequently lower the child's opportunities for developing his or her originality.

In research on origins of achievement motivation using a parent-child small group research procedure Rosen and D'Andrade (45) found the parents of high achievement boys had higher aspirations for their sons to do well at given tasks
and to have a high regard for their competence. This finding was similar to the theoretical rationale in which the person defines himself in terms of how he perceives other people view him. In summary when either the paper-pencil or interaction originality measure was used the sex of the child appeared to be an important intervening variable in need of further investigation to determine the relationship between parental expectations and children's originality.

Comparison of Originality Measures and Parental Behaviors

Another method for analyzing the data was used to study the research variables. The intercorrelations shown in Table 6 were not used to test the hypotheses directly but to provide supplemental information on the relationship of the study variables. Each child was ranked into high, middle and low originality levels in terms of his score obtained on the paper-pencil and interaction originality measures. An analysis of the relationship between the two originality measures and parental directive and supportive socialization patterns was made using the Spearman rank correlation coefficient statistical technique.

From a comparison of the correlations of the paper-pencil and interaction originality levels in Table 6 the measures were positively related to one another; however, the correlation was not statistically significant and was quite low.
Table 6. Correlation of M.T.C.T. paper-pencil and interaction originality measures and the parent direction and support socialization patterns

<table>
<thead>
<tr>
<th>Paper-Pencil Originality Levels of Children</th>
<th>Parent Direction</th>
<th>Father Direction</th>
<th>Mother Direction</th>
<th>Parent Support</th>
<th>Father Support</th>
<th>Mother Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper-Pencil Originality Level of Children</td>
<td>1.000</td>
<td>+.095</td>
<td>+.070</td>
<td>-.029</td>
<td>-.046</td>
<td>+.166</td>
</tr>
<tr>
<td>Interaction Originality Levels of Children</td>
<td>+.168</td>
<td>-.266*</td>
<td>-.147</td>
<td>-.339**</td>
<td>+.006</td>
<td>+.062</td>
</tr>
</tbody>
</table>

*Correlation coefficient with 58 df significant at .05 level.

**Correlation coefficient with 58 df significant at .01 level.
The M.T.C.T., as a paper-pencil measure administered in the classroom with certain time limits, required the assumption that parental socialization may influence the child's originality in school. The interaction originality measure did not need to assume the influences of parent-child interaction for the consequences of the parents' influence were more immediate. In brief, the interaction originality measure appeared somewhat preferable for the present research concerned with parental socialization and the child's originality since a paper-pencil measure could be substituted for parent-child relations as it could the child's originality from them.

In terms of the paper-pencil originality measure the directive behavior of the parents together and individually correlated somewhat positively with the child's originality levels. However, the correlations were weak and in the opposite direction of the first hypothesis. It was hypothesized that parental directive behavior would be inversely related to the child's level of originality.

When the interaction originality measure was used parental direction was inversely related to the child's originality as had been hypothesized. The correlation of the parents' directive behavior with the children's originality levels was in the negative direction and statistically significant. In a comparison of the correlations of the fathers
and mothers to the children's originality the mothers' direction appeared to be more crucial than that of the father. The mothers' directive behavior was negatively correlated with the children's originality level at the .01 level of statistical significance.

In one of the few studies concerned with parental control and the child's creativity using an interaction problem-solving laboratory procedure Straus (55) found high parental direction to be negatively correlated with the child's correct solutions to problems. In view of the available findings, parental direction appeared to be inversely related to children's originality as reported in the literature. In the present study the relationship of parental direction and the child's originality was found to be more clear-cut when the interaction originality measure was used than was true with the paper-pencil criterion.

The relationship of the originality measures to the parents' supportive behavior was confusing. The paper-pencil measure was more highly correlated with parental support than the interaction measure although none of the correlations were statistically significant. The variation between the parents' support is a problem for interpreting the relationships when using either measure. The study hypothesis was that the more supportive the parents the more original their child.
The fathers' support was positively correlated and the mothers' support was negatively correlated with the children's originality levels when either originality measure was used. However, because the correlations for the mothers' support was a larger negative value than the fathers' positive correlation with the children's originality in terms of the paper-pencil criterion, the parents' combined supportive influence was negative. When the interaction originality measure was used the value of the mothers' negative support correlation was smaller than that of the fathers' positive correlation with the children's originality so the combined parental supportive influence was positive. When the parents' correlation values were found to be in differing directions summing the parents to make a parental unit tended to mask the differences between the two parents. The supportive patterns of the two parents was more meaningful when the parents were analyzed separately as in the latter three hypotheses.

In the interaction creativity research previously cited (55) Straus found father and mother to child support to be related to the children's creativity as follows: Father to child support in Bombay was a correlation of -.04 and in Minneapolis it was -21. The mother to child support in Bombay was -.16 and +.04 in Minneapolis. Straus
defined creativity as the number of the child's suggestions for ways of solving the problem irrespective of the practicability or whether it was used; therefore, creativity differed from originality as used in this research. Originality in the present study was the unusual and solution-oriented response of the child in comparison with the actions of other children in the sample. When Straus correlated parental support with the child's correct solutions to the problems, which was more like originality as measured in the present study, he found the following positive correlations: Father to child support in Bombay was .27 and .34 in Minneapolis; Mother to child support in Bombay was .04 and in Minneapolis it was .34.

The correlations for parental support obtained in this study, particularly when using the interaction measure, were somewhat in agreement with those of Straus in that they were generally low and some of them were even negatively correlated with the children's originality. Straus' (55) correlations differed from those in this study in that they were in the same direction for both parents. In the present inquiry fathers' support was positively related and the mothers' was negatively related to the children's originality when both the paper-pencil and interaction originality criteria were used. Therefore, in terms of the study data it
appeared that the more supportive the fathers and the less supportive the mothers the more original their children when either originality measure was used. This finding is quite amenable to those of Rosen and D'Andrade (45) and Weisberg and Springer (66) in which the fathers seemed to provide more support to the children than did the mothers. And as had been theorized in terms of the instrumental-expressive framework, the supportive roles of the fathers and mothers of the more original children were found to be less conventional than those of the parents of the less original children.

Assumption of the Study

Although it was possible to achieve a certain degree of precision using a small group method of research, observations from laboratory situations pose a problem for interpreting the findings. The symbolic interaction theoretical framework used in this study emphasized socialization as a developmental process and this study analyzed a restricted area and period of parental socialization. Therefore, it was assumed that the observed parent-child interaction behavior, though limited to one point in time and in a laboratory situation, was indicative of parental socialization patterns. It would seem that unless something most unusual occurred prior to or during the observations that the parent-child behavior would be indicative of their behavior in the "real" world.
One of the major problems cited in research based on observing people (7) is the possible distorting effect that knowledge of being observed may have upon their behavior. There were indications the family triads became involved enough in the tasks to become relatively oblivious to the laboratory setting. In addition, the interaction continued over a long enough time that it would have been difficult for the families to maintain a consistent "front."

The validity of this assumption was checked by a comparison of the parents' behavior in the Waiting Room situation in which they were not supposed to be aware of being observed with the interaction situations in which they knew they would be observed. If there would be no difference in the parents' behavior observed in the Waiting Room in which they were not told they would be observed and in the situations in which they knew their behavior would be observed, regardless of whether they indicated they were or were not aware of being observed in the Waiting Room, then there would be some assurance that the parental directive and supportive behavior patterns were somewhat indicative of the parents' interaction patterns with their child.

The correlation between the fathers' and mothers'
Table 7. Significance of difference between correlations of parents' direction and support of those who were and those who were not aware of being observed

<table>
<thead>
<tr>
<th>Parent, Behavior and Awareness Groups</th>
<th>n</th>
<th>Correlations</th>
<th>z' Calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathers:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware</td>
<td>31</td>
<td>+.182</td>
<td>+.182</td>
</tr>
<tr>
<td>Not aware</td>
<td>29</td>
<td>-.116</td>
<td>-.116 1.10</td>
</tr>
<tr>
<td>Support:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware</td>
<td>31</td>
<td>+.281</td>
<td>+.288</td>
</tr>
<tr>
<td>Not aware</td>
<td>29</td>
<td>+.127</td>
<td>+.126 .60</td>
</tr>
<tr>
<td>Mothers:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware</td>
<td>29</td>
<td>+.195</td>
<td>+.198</td>
</tr>
<tr>
<td>Not aware</td>
<td>31</td>
<td>-.023</td>
<td>-.025 .82</td>
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<tr>
<td>Support:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware</td>
<td>29</td>
<td>+.334</td>
<td>+.525</td>
</tr>
<tr>
<td>Not aware</td>
<td>31</td>
<td>+.121</td>
<td>+.121 1.49</td>
</tr>
</tbody>
</table>

directive and supportive patterns between the Waiting Room and the total of the other interaction situations, the Story, Code, Puzzle and Tantalizer, were compared in two groups. One consisted of those fathers and mothers who answered they were "aware" of being observed and those who indicated that they were "not aware" of being observed in the Waiting Room.

The z' test for determining the significance between two correlations was used to determine whether within each of the four parent-behavior categories, such as father direction, there would be a difference between the behavior
of those who said they were and those who were not aware of being observed in the Waiting Room. The correlations transformed to z's, as shown in Table 7, were compared with the corresponding z values in a normal distribution table. The table z values were doubled for making the two-tailed test. The calculated z's were found not to be significantly different. Thus, whether the fathers and mothers were or were not aware of being observed made no significant difference in their directive and supportive actions toward their child.
IMPLICATIONS FOR FUTURE RESEARCH AND SUMMARY

The implications for future research section will be discussed in light of the substantive problem, the theoretical approach and the methods used in this study. The chapter will then conclude with a brief summary of the study.

Findings in Context of Study Objectives

The areas in need of further research will be discussed in relation to the empirical tests of the study hypotheses, the conceptual approach, the method of study and the originality measures used in the present study.

Parental socialization hypotheses

It was found that the parents of the more original children were less directive of their children than the parents of the less original children when the interaction criterion was used. It was also found that the expectations of the fathers and mothers of the more original children were more closely related to their children's originality than was true for the parents of the less original children in terms of the interaction measure. When the paper-pencil originality measure was used none of the study hypotheses were accepted. It is possible that in attempting to control for possible confounding elements discussed in the literature such as social class, family type and the children's I.Q. that the
sample became so homogeneous that possible statistically significant differences were eliminated. Parental direction and support in a relatively homogeneous middle-class sample of families may be so subtle that it would require a larger sample to detect differences or perhaps a more precise observational measure. If the reason for the lack of empirical support for the study hypotheses would be due to the homogeneity and/or size of the sample then the factors which were found to be statistically significant may actually have been highly significant.

Another possible source for the lack of empirical support for some of the study hypotheses may be that parental direction and support may not be as important to the child's originality as suggested in the literature. It must be admitted that much of the writing on creativity and originality is speculative and in need of empirical investigation. This is one of the few studies concerned with actual parent-child interaction patterns and the child's originality. The work by Straus (55) is the most closely related research which has been reported to date. He developed his own measure of creativity and found parental directive behavior to be negatively correlated and parental support to be positively correlated with the child's problem-solving ability. His findings were also not as statistically significant as one would expect from other research reported on parental factors.
and the child's originality.

The writer believes that it would be desirable in future research to specify the parent-child roles and role relationships in more depth than was done in this research. The study hypotheses now seem too broad in terms of the findings. Direction and support are gross behaviors which could be analyzed in terms of existing parent-child problem-solving tasks which appear to be sex-specific to determine how these relate to the parents' direction and support and the child's originality.

In future research on parental socialization and children's originality the writer would suggest studying two types of parental direction. In the present study as well as the research reported by Rosen and D'Andrade (45) the acts which occurred most frequently were directional. Rosen and D'Andrade divided directive behavior into "specific directions" which were acts instructing the child to do specific things in order to solve a particular problem. The other type of direction was "nonspecific" in which acts were geared to giving the child some information but were not specific enough for him to rely on them to complete his task. The present study was concerned only with the specific type of parental directions; however, because parental direction is also important in the non-specific sense it would be worthwhile to determine how both types appear to influence the
child's originality.

A possible limitation in the present study was the use of only two behavioral parent-child categories. Direction and support were used to analyze the parents in combination as a parental unit and individually in relation to their child's level of originality and sex; direction and support constituted four of the five study hypotheses. The reason the investigator used this procedure was to take advantage of the specificity of the interaction data in terms of direction and support, the two generally-accepted broad aspects of parental socialization. In using this procedure it was possible to become rather rigorous in analyzing the triads and diads by moving from the general parent-child relations to the more specific in terms of the child's level of originality, the sex of the parent and the sex of the child.

If this study were to be replicated some promising alternatives might be to increase the size of the sample and/or to include families from differing social classes. One of the more productive approaches appears to be to analyze differences between the parents' socialization of sons and daughters to determine if they have differing consequences upon children's originality.

Conceptual approach

The composite instrumental-expressive and direction and support analytical framework was particularly useful in this
study because it posited the roles of the family members in a sex-specific manner. Because the sex of the parents and children appear to be important socialization variables the framework would seem to provide a useful scheme for future research. In this study the father was definitely the more instrumental or directive parent and the expressive or supportive roles were assumed as much by fathers as by mothers regardless of the child's originality level. Because of the differences in the amounts of direction and support which sons and daughters received in this study as well as in Straus' (53, 55) research it appeared that sons were not given more direction and daughters more support as has generally been described in the literature. Although the differences between the specific sex of the parents and children were not clearly demonstrated in terms of the children's originality it would seem that the relationships found thus far would have differing consequences upon the child's originality.

**Methods of study**

In terms of the method of research this was a laboratory study and not an experiment in the sense that particular parental actions were manipulated and then subsequent effects of the particular behaviors upon the child's originality were observed. Instead, parent-child interaction data were obtained
in laboratory situations in which specific parental socialization behaviors, which had been discussed in the literature, were observed. Thus, the study is basically of an exploratory nature even though it involved testing hypotheses, causal inferences should not be made from the findings.

One of the most difficult tasks in setting up laboratory research is in determining which variables are the most important ones to study. As Festinger (18) cautioned, despite the more rigorous conditions in a laboratory situation, it is probable that the researcher's factors will be so weak that no differences become apparent. Unfortunately, one generally knows after the laboratory research is over whether the variables were strong enough. Festinger also stated that when the results of laboratory research are positive the researcher can be relatively certain about his interpretations and conclusions. However, as occurred in several of the study hypotheses, when one encounters nonsignificant differences he can reach no definite conclusion. The writer tends to feel that the negative results are due more to the provisional nature of the originality measures and the parent-child observational methods rather than to the parents' direction and support as not influencing the child's originality. Results on two of the five study hypotheses were significantly different when the interaction originality measure was used. However, one cannot state with certainty
precisely why the other hypotheses were not supported. It would seem desirable at this point of inquiry to consider further research on parental direction and support by studying families in real-life situations. There is a need for an interplay of various types of research methods in order to provide an adequate perspective from which to generalize.

The writer believes that small group laboratory research provides one of the more direct means for testing certain parent-child relations described in the literature as influencing children's originality. One aspect of this research which might be improved upon would be to use a concealed movie camera with sound either instead of or in addition to observers sitting behind windows with one-way glass and a tape recorder. There may be a reaction-effect to the instrument if the subjects were not told of the researchers' means of observation if the subjects became aware of the camera. In the present research several of the children were reported to have been "bothered" by the tape-recorder and a few of the more exploratory children who peered into the one-way glass informed their parents that people were on the other side. When one considers all of the factors involved in recording the interaction of three people it is difficult to determine how the observers could record complete and simultaneous interactions. Interaction behavior is categorized in
the following manner (4): who originates, nature of the act, toward whom the act is directed and the temporal sequence. A movie camera would have the advantages of being able to record the behaviors precisely as they occurred, not being subject to physical fatigue and films could be checked and rated by several observers; if there was doubt about a particular interaction segment the film and sound could be run at a slow speed.

It would seem preferable to reduce the number of behavioral categories from ten to around six. Some of the categories were so small that it would be difficult to make inferences from them. Also the use of fewer categories would simplify data analysis and would tend to increase observer reliability.

Conversations with some of the persons who worked on the research from which the data in this study were derived revealed that several of them believed that there were more differences between the parents' interaction patterns in the various families than were evident in the data analyses.

In terms of parental socialization as having consequences upon the child's originality it would be well to consider studying children of from five to seven years of age. It is quite likely that by the time the child is eight years old various parent-child patterns are quite well-established and this presents a problem when an outsider observes the family
interaction at one point in time.

What would be most informative would be to do longitudi­

da case studies of young children identified as highly

original as has been done with children who scored high on

I.Q. tests. However, because this is a more costly approach

than most researchers could engage in, cross-sectional

studies, replication research and making a concerted effort

to specify one's research conditions as well as the findings

should lead to codification and a more conclusive body of

evidence than is presently available.

Originality measures

The paper-pencil M.T.C.T. and the interaction problem-
solving originality measures yielded somewhat different
 findings. Of the study hypotheses five were not accepted
when the paper-pencil criterion was used while two of the
hypotheses achieved statistical significance and were
accepted when the interaction criterion was used.

Although the use of the two measures posed a problem in

discussing, interpreting and deciding whether to accept
or reject the substantive hypotheses the writer believed
that there was merit to such an approach. Campbell and Fiske
(12) have advocated convergent and discriminant validation by
a multitrait-multimethod matrix as a means for establishing
criteria for accepting various tests as valid and discarding
others. The present study was an attempt to determine the
relevance of such an approach in the area of originality measures. Even though the M.T.C.T. have been widely used tests for originality in children there have been few findings which support their reliability and validity. Therefore, the interaction originality measure was used as a second means for measuring originality.

In the comparison of the substantive parent-child variables and the originality measures in Table 6, page 122, it was found that the paper-pencil criterion did not correlate as well as the interaction measure of originality with the parent-child socialization patterns as the literature and theorizing suggested as well as the interaction measure. It seemed reasonable to expect that the outcomes of the interaction situations, the parental socialization patterns and the child's originality performance may be more closely related than the parent-child interaction patterns with the child's score on a paper-pencil measure given in the classroom.

Because of the low correlation between the paper-pencil and interaction originality measures it is quite likely that they measure different things. The paper-pencil M.T.C.T. measured the child's originality in terms of his psychomotor drawing ability when not interacting with anyone else in the classroom. The interaction originality measure was a result of the child's originality in performing two verbal tasks, developing a story and code, and in a psychomotor task in
constructing a shelf using the given materials. In the interaction situations the child may have acted alone or with his parents. The parents interacted with the child in the story and may have interacted with him in solving the code and puzzle problems but were not instructed to do so. If originality is situation-specific, as has been suggested in previous research (14, 35, 36) then parental factors would be expected to be more closely related to the child's performance which is an outcome of the same situations.

As Campbell and Fiske (12) pointed out it is not uncommon for there to be no or a low relationship between two independent methods of measuring a trait. Possible alternatives to this research dilemma may be that neither method is measuring originality, one of the measures may measure originality but the other does not or the children's responses may be specific to the measures and not related to originality. It is hoped that the results of the measures used in the present study will encourage others to modify and develop new measures for originality.

Some of the aspects of the M.T.C.T. which the present writer feels may be modified were the following. As mentioned earlier Wallach and Kogan recommended creating a game-like atmosphere free of time limitations; therefore, the use of a stopwatch and holding the children to ten minutes for doing the three paper-pencil tasks could be eliminated.
The children were instructed to develop titles in and within the three tasks but as nearly as could be determined the titles were not scored for originality. When the titles were not used and yet the children were instructed to make them, which took time out of the allotted period to develop them, then this would seem to influence the reliability and validity of the tests. The use of different colors of the pieces of paper for the Picture construction test introduced a variable which may be quite important in influencing an eight-year-old's originality. It would seem preferable to use either white or gray rather than colors. Torrance described the use of bonus scoring in the Circles test in the manual (61). The basis for bonus scoring is that because subjects do not often combine the circles those who do are given extra points. However, when the children are instructed to label each circle this implies using each circle individually and combining them may not occur to the child. The instructions to label each circle are confusing as well as ambiguous in view of the scoring procedure. It would also seem possible that a child may simply draw lines between each circle, consider it a molecular structure and on the basis of bonus point scoring be considered highly original.

Of the three interaction originality tasks the story correlated the least with the total interaction originality score. The story was also found to be difficult to score
because of problems in determining whether the child's story was merely retelling family events, a children's story or truly original. In future research it would be desirable to use a task which would be easier and less ambiguous to score.

In brief, it is suggested that researchers analyze the existing measures of originality and use them with caution. When selecting originality measures particularly to study children it would be well to use those which cover a range of ability areas such as the I.Q. tests attempt to do rather than those specific to given ability areas. The tendency in the originality research has been to accept the Torrance tests as though their reliability and validity has been established; however, in view of the findings in the present study this is not a particularly sound research procedure. Dentler and Mackler (14) described this situation as a "methodological chaos" which offers a field-day for the mental measurement specialist.

The ages of subjects taking originality tests has not been

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1Joan Aldous. Minneapolis, Minnesota. A reliability check was made between three raters' scoring of the children's stories. The per cent of agreement was as follows: 78.3, 63.3 and 66.7 were the same; 18.3, 28.3 and 26.7 were for a one-point difference; 3.3, 8.3, and 6.7 were for a two-point difference. There were no three-point differences between the raters. Private Communication. 1968.
a concern of many of the researchers other than Torrance. Torrance has designed his paper-pencil M.T.C.T. to be appropriate for use in kindergarten through graduate school. Apparently Torrance does not feel modifications for the subjects' ages are necessary in the tests. This is quite a different approach from the I.Q. which measures the subject's intelligence in relation to his chronological age. It would seem that there might be differences used in the originality tests in terms of the ages of the subjects. Although age was controlled in the present study by studying eight year-olds it is possible that some of the children were older than others and may have begun to enter the slump suggested by Torrance when, near the end of the third-grade, there is a severe decrement in the child's creative thinking abilities. Of the related research cited on parental factors and children's originality the age range was from four to fourteen years of age. Wells studied four- and five-year-olds and suggested selecting children five years of age and older in the future. Straus studied fourteen-year-olds. Most of the other researchers studied nine-year-olds who would be at a low point in terms of the developmental curve of creative thinking developed by Torrance and his associates (57). In brief, it would seem that in terms of maturation and social-psychological factors it would be worthwhile to investigate the originality scores of children of various ages to
determine whether this might not be an important variable to be accounted for within the originality measures for children.

Summary

This study provides evidence on parental directive and supportive socialization patterns theorized to influence originality in young children. The roles of the parental unit, the fathers' and mothers' roles, their role relationships with the child and expectations for the child were analyzed in relation to the children's levels of originality. Due to the provisional nature of the originality measures, paper-pencil and parent-child interaction criteria were used to analyze the parental socialization hypotheses. If the reader will view this thesis in the context of an exploratory study of an homogeneous sample of middle-class families, the following generalizations may be made.

The parents' directive socialization patterns appeared to have no significant influence on the child's level of originality when the measure of originality was in terms of the paper-pencil Minnesota Tests of Creative Thinking. However, when the interaction originality measure was used it was found that the less directive the parents were, the more original the child. The supportive behavior of the parents appeared to have no influence on the child's
originality when both originality criteria were used.

The father's role was more directive than the mother's at each originality level when both originality criteria were used; however, there were no significant differences between the fathers' and mothers' supportive patterns in relation to the children's originality. The fathers tended to be more supportive in the middle and high originality levels of children, but the differences were not statistically significant when the paper-pencil and interaction originality measures were used. When parent-child role relationships were analyzed there were no statistically significant differences in relation to the children's originality levels, their sex and the sex of the two parents in terms of both of the children's originality criteria.

Parental expectations for the children appeared to be more significant in terms of the sex of the parents and the child rather than the child's originality level. The expectations of the fathers were more closely related to the children's performance than those of the mothers. In a comparison of the sons and daughters the expectations of both parents tended to be less for daughters than for sons. The latter results were similar to Straus' socialization deficit theory (55) in which daughters are traditionally not expected to become as competent in various areas as are sons. These findings also suggested that the father may be more important
in terms of parental direction as well as support than has generally been reported in the literature.

In the test of the study assumption it was found that the Waiting Room served as a check for approximately half of the parents and that knowledge of being "aware" or "not aware" of being observed in the laboratory Waiting Room made no statistically significant difference in the parents' directive and supportive socialization patterns.

The writer is hopeful that this study will stimulate further research on the nature of parental socialization and children's originality. In terms of the findings from this study there is an obvious need for understanding the intricacies of parent-child relations, how they influence originality in children, developing improved methods for studying parental socialization and refining the measures of originality. One of the most obvious implications of this study from the various findings is the need for researchers, parents and teachers to be cautious in the use and interpretations made from the relatively recent originality measures for children. It is a truism that no method is any better than the theory by which it is tested. This truism also has a reciprocal which is that no research results are any better than the methods by which they are obtained (42). Because the measures of originality for children are so new and their reliability and validity have
not been investigated to any great extent the writer believes that this is the area most in need of further research.
LITERATURE CITED


ACKNOWLEDGMENTS

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The writer is especially grateful to her husband for his understanding support, her parents for their belief in educating a daughter and to the fellow graduate students at
Iowa State University and the University of Minnesota, all of whom, made working on the degree a worthwhile educational experience.
APPENDIX A: MINNESOTA TESTS CREATIVE THINKING
IN THIS BOOKLET ARE THREE INTERESTING THINGS FOR YOU TO DO. THEY WILL GIVE YOU A CHANCE TO USE YOUR IMAGINATION TO THINK OF IDEAS AND TO PUT THEM TOGETHER IN VARIOUS WAYS. YOU WILL BE ASKED TO EXPRESS YOUR IDEAS THROUGH DRAWINGS. DO YOUR OWN THINKING AND COME UP WITH IDEAS OTHERS WILL NOT THINK OF. SINCE ANY DRAWING TELLS A STORY, YOUR DRAWING SHOULD TELL AS INTERESTING AND AS UNUSUAL STORY AS YOU CAN THINK OF. KEEP ADDING TO YOUR IDEA TO MAKE IT TELL AS COMPLETE A STORY AS POSSIBLE. TURN TO THE NEXT PAGE WHEN GIVEN THE SIGNAL.

<table>
<thead>
<tr>
<th>Scoring Category</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
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<td>Elaboration</td>
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</tbody>
</table>

E. PAUL TORRANCE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY
UNIVERSITY OF MINNESOTA
1964
TASK I. PICTURE CONSTRUCTION. Here is a piece of colored paper. Think of a picture or an object in which this form would be a part. Then lift up the piece of paper and stick it where you want it on the page. Then add lines to make your picture. Try to think of a picture no one else will think of and give it a name or title.
TASK 2. FIGURE COMPLETION: Make some interesting pictures by adding lines to the incomplete figures on this page. Think of pictures that no one else will think of and make them tell as interesting, exciting, and as complete stories as you can. Make up a title for each.

1.  
2.  
3.  
4.  
5.  
6.  
TASK #3. On this and the next page, see how many interesting objects you can draw that have a circle as a main part. With pencil or crayon add lines to the circles to complete your pictures. Your lines can be inside the circles, outside or both inside and outside. Try to think of things that others will not think of. Make as many pictures as you can and make each tell an interesting and complete a story as you can. Add labels below each picture.

Turn to the next page.
APPENDIX B: PARENT–CHILD INTERACTION TASKS
STORY TELLING - Each of you is to tell the others a story. The words on the attached list may give you some ideas. Check those off you use. You can each take about three minutes. There is a timer on the supply table you can set if you wish to give you an idea of how the time is going. Decide in what order you will tell the stories. When you are a listener, you should ask questions so the story teller will tell the best story he can. After all of you have told your stories, you are to decide, 1) who told the best story and 2) why.

snake in the grass
waltz
fly
dolly
diamond
bat
lamp lighter
ball
unicorn
Saturn VII
SECRET CODE (PARENTS) - Spies and undercover men use codes to disguise their messages. One of the simplest codes can be made by reversing the alphabet. Z stands for A, Y for B, X for C, etc. You parents are to explain what codes are to your child using another code you two have made up as an example for your child. When you have finished your explanation, your child is to make up a code of his own. Have your child work on the code until the three of you are satisfied with the result. You will find the necessary working materials on the supply table section numbered _____.

It should take about **six minutes** for a child to make a code. Please sign your name (not in code) on the paper with the code you two have made. Have your child put his name (not in code) on the paper with his code.

SECRET CODE (CHILD) - Your parents are going to tell you how to make a secret code like spies use. You then can make one of your own.

PUZZLE (PARENTS) - On the supply table you will find a small china animal. Your child is to make a shelf and attach it to something on the wall using only the objects on the supply table. He is then to place the animal on the shelf. This should not take more than **five minutes**.

PUZZLE (CHILD) - Your parents are going to tell you about a puzzle you will have the chance to solve.
TANTALIZER (MOTHER) - You and your husband will need to pool your instructions to set this game up for your child. Arrange the mirror drawing equipment you will find on the section of the supply table marked ___ so your child can look over the shade into the mirror, but cannot see the base area except through the mirror. This is essential for your child to do the task correctly. Place instruments #1 and #2 (see instructions in the box) on the two red dots. Hang the yellow balls onto the steel rod. Set the truncated cone small end up in the middle of the base area.

After your child has removed the ball from the steel rod, have him set the ball on the cone.

For your child's comfort, please set the equipment up on the work table.

TANTALIZER (FATHER) - You and your wife will need to pool your instructions in order to set this game up for your child. Place the steel rod you will find in the Tantalizer box on the supply table in the grooves of instruments #1 and #2.

Have your child insert the pin end of the instrument #3 into the eye of one of the yellow balls and remove the ball from the rod, looking in the mirror, not directly at what he is doing.

Your child is to remove the instrument from the yellow ball when he has set it on the cone, without upsetting things.

It should take him about four minutes to perform the task.
TANTALIZER (CHILD) - This is a fun game using a mirror. Your parents will tell you what to do.
APPENDIX C: LETTER TO PARENTS
May 13, 1965

Mr. and Mrs. __________
1969 ________________
Minneapolis, Minnesota

Dear Mr. and Mrs. _____:

I am writing to ask you to participate in an important scientific study. We are trying to learn more about how children act in various problem solving situations. To make the situations as natural as possible, we are asking parents to participate with their third-grade children. We wish we could include all the family, but our facilities here at the University are limited. For our study we are selecting parents and children from the University of Minnesota Demonstration Schools. We would like you and your daughter,______, to help with this study.

We would like the three of you to spend about 90 minutes doing various game-like activities. Your participation will enable your daughter to earn about ten dollars. The situations should be fun for you, and we hope the information we obtain will prove useful to parents.

We will be doing this research in the new Business Administration Tower, Room 1272, on the West Bank Campus of the University of Minnesota. I will telephone you shortly to arrange a time when you and ____ can take part in the study.

I do hope you will be able to help us in this research. I know you will find it interesting, and you will also have the satisfaction of knowing your assistance will help us to serve families better in the future.

Sincerely,

Joan Aldous, Ph.D.
Family Study Center
APPENDIX D: INTERCORRELATION OF STORY, CODE AND PUZZLE COMPONENTS TO THE INTERACTION ORIGINALITY MEASURE LEVELS
Intercorrelation of Story, Code and Puzzle Components to the Interaction Originality Measure Levels

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