INFORMATION TO USERS

CREATIVE AND LEADERSHIP BEHAVIORS

OF PRESCHOOL CHILDREN

by

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FU, VICTORIA RUTH. Creative end Leadership Behaviors of Preschool Children. (1973) Directed by Dr. Helen Canaday. Pp. 108.

The present study was conducted to investigate creative and leadership behaviors of a group of preschool children, who were selected from the Greensboro Head Start Program and church sponsored kindergartens. The data for creative behavior were collected with The Unusual Uses, Product Improvement, and Picture Completion Tests of The Torrance Tests of Creative Thinking (Torrance, 1966), which were administered to each child individually. The data for leadership behavior were collected with The Nursery School Leadership Observation Schedule (Fu, 1970). Each child was observed for four times over a period of time.

The findings were evaluated in terms of the following five questions:

1. What is the relationship of sex of the subjects to creative behavior? There was a significant sex difference in the children's creative Originality scores. The boys showed more original creative responses than did the girls. This was in accordance with Torrance's findings (Torrance, 1971).

2. What is the relationship of the socio-economic status of the subjects to their creativity behavior? There was a significant social class difference in creative fluency ability in favor of the middle class children. It tended to be in accordance with the belief that middle class

children are more proficient in their language skills (Loban, 1965). Language proficiency might have an influence on the higher creative fluency scores of middle class children.

3. What is the relationship of the sex of the subjects to their leadership behavior? There was a close but not significant difference by sex in the leadership scores among this group of preschoolers. The boys exhibited more leadership behaviors than the girls. Such a difference could be explained by the fact that boys are more accepted as leaders socially.

4. What is the relationship of the subjects' socio-economic status to their leadership behavior? There was no significant difference by social class in leadership behavior. However, it could possibly be assumed that leadership and followership behaviors may be determined by child-rearing practices (democratic and authoritarian) according to socio-economic background (Bronfenbrenner, 1958).

5. What are the interrelationships between leadership and creativity in preschool children? The interrelationships between leadership and creativity among preschoolers showed different degrees of correlation. Though the variables for measuring similar creative traits did not correlate significantly, the scores for different creative traits within the same test did. The correlation may be attributed to the tendency of centering attention on one detail of an event at a time by these children who were on a developmental level corresponding to Piaget's Concrete Operational Stage

(Phillips, 1969). Moreover, though there was no significant correlation for the scores of the total group, the aspirants among the girls possibly were rejected by their peers for not acting according to sex-appropriate standards (Torrance, 1971). This phenomenon seemed especially apparent when preschool aged children were involved. There was a significant correlation between Successful Leadership and Unsuccessful Leadership among the lower class children in terms of aggression and nonconformity as well as among the middle class children in terms of cooperation and support (Bronfenbrenner, 1959). Furthermore, language proficiency was found to be significantly correlated with successful leadership and creativity among the middle class children (Loban, 1965). The significant correlation between Submissive Followership and creative Fluency among the lower class children may be dismissed as a chance result.

The unsubmissive followers showed no significant correlations. It was probably due to their independent and self-sufficient traits which made them less effected by group feelings and judgements.

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to enjoy creative leadership and/or followership roles as worthy members in a free and democratic society.

To David Fu, my brother, who in his busy research schedule spent countless hours observing and recording the behaviors of these young children, I am particularly grateful.

Last but not least, I would like to express my unending gratitude to my parents, Dr. and Mrs. Sheng-Ling Fu, for the encouragement, understanding, assistance, and belief held for me throughout my academic career.

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CHAPTER I

INTRODUCTION

In recent years great interest has been aroused by
and directed toward the study of leadership and creativity
in various settings. In the study of leadership much empha-
sis has been placed on leadership behavior among various age
groups. However, research in leadership and creative
characteristics exhibited by preschool children has been
neglected. The nature of creativity itself renders its
study among preschool children difficult. For creativity is
viewed by many as ". . . one of the vaguest, most ambiguous,
and most confused terminology in psychology and education
today (Ausubel & Sullivan, 1970, p. 682)." Thus far the
studies of preschool creativity have been limited to the
fields of creative art, creative teaching, creative classroom
environment, developing and validating measurement instru-
ments, and certain creative traits, such as, creative think-
ing, as related to personality characteristics.

Researchers generally conceded that creativity is
found in all human beings. Anderson (1959), in discussing
creativity, stated that ". . . creativity, the emergence of
originals and of individuality, is found in every living cell
(p. xii)." Ausubel and Sullivan (1970), pointed out that the

difficulties in defining the term "creativity" and "creativity" as a trait is due to the confusion in looking at

> . . . the "creative person" as an unique individual personality a rare and singular degree of this trait, i.e. a degree sufficient to set him off quantitatively from most other individuals in this regard (p. 682).

As a matter of fact, creativity varies along a continuum (Anderson, 1959). It is found in all human beings and can be applied to all areas of human behavior (Schmidt, 1969). Moustakas (1956) speculated that ". . . intrinsic creativity emerges, or is expressed, when the person is free to use his potentialities (pp. 273-274)."

Above all, creativity is found even in young children and infants. In observing infants Torrance (1962) found that in handling and manipulating objects in various ways and in facial expressions, infants showed the beginnings of the manifestations of creative thinking. Having studied creative artistic imagination of children from 3-7 years old, Griffin (1958) concluded that except in rare cases creativity was functioning in preschool children. Anderson (1959) said that

> . . . creativity was in each one of us as a small child. In children creativity is universal. Among adults it is almost nonexistent. The great question is what has happened to this enormous and universal human resource? This is the question of the age and the quest of . . . research . . . (p. xii).

While studies of creativity among preschool children are limited, a comparative study of such traits among advantaged and deprived children is much less frequently conducted. However, Reissman (1962), Ausubel and Ausubel (1963), and other researchers agreed that in terms of originality and fluency, creativity was found to be less proficient among the disadvantageous children than among the more advantageous ones. Rogers (1967), however, found the difference was that while advantaged children were more superior in tests of drawing abilities, the disadvantaged children were more superior in figural fluency. Duke (1964) found that middle-class children achieved higher verbal creative fluency, verbal flexibility, and verbal originality than lower-class children.

Leadership characteristics are found in preschool children. Leadership finds expression in group interaction. Thus a leader is one who moves the group to action (Cunningham, 1951). Among preschool children Parten (1933) observed that there were two types: the dominative or "bully" leaders and the integrative, task oriented "diplomat" leaders. She (Parten, 1933) further observed that preschool children preferred the latter type of leaders. Short (1966) and Whyte (1943) among others in their researches recognized that leadership among lower class groups tended to be maintained primarily through physical prowess.

Leadership ". . . fluctuetes with the change in the needs of the groups es determined by both social maturation and situational fectors (Ausubel & Sullivan, 1970, p. 353)." But in nursery school leadership is feirly stable (Gellert, 1961).

There is obviously a need for more research in the area of investigating the "dimensions of a child member's leadership in children's groups (Mussen, 1960, p. 833)." Creativity is also worth further research as stated above by Anderson (1959). McCandless (1967) in discussing creativity and creative children further emphasized this need by stating that the field of creativity is well worth studying. He maintained that "Any method whereby the innovator and originator, particularly if his products are socially useful . . . fully deserves study (p. 333)."

Since creativity as a treit is applicable to all areas of behavior, one can assume thet it is applicable to leadership as well. Such an assumption, therefore, is invaluable for the study of creative and leadership behaviors among preschool children. Various people have inferred from or referred to the relationship between creativity and leadership. Taylor (1969, 1971) in formulating a transactional theory of creativity has come to the conclusion that "Creativity involves a transecting personality in a stimulating environment . . . it is relevant to leadership and particularly creative leadership behevior (1969, p. 6)."

Stogdill (1968) in describing leadership clarified its relationship with creativity by viewing leadership not as a passive occupancy of a position or acquisition of a role, but as a process of originating and maintaining role structure (p. 23). While Homans (1950) identified an originator as a leader, Hemphill (1949) regarded a leader as one who "initiated structure." To him a leader may set the stage and create expectations in initiating structure (p. 389).

Statement of the Problem

The purpose of this descriptive study was to investigate the creative and leadership behaviors of lower- and middle-class preschool children. In other words, the researcher investigated the relationship between creative performance of preschool children and their leadership behaviors, respective of sex and socio-economic status differences.

Questions to be Answered

This study is designed to answer the following questions:

(1) What is the relationship of sex to creativity?

(2) What is the relationship of socio-economic status to creativity?

(3) What is the relationship of sex to leadership?

(4) What is the relationship of socio-economic status to leadership?

(5) What are the interrelationships between leadership and creativity among preschool children?

Limitations

1. This study was limited to kindergarten-age children in a southern urban area.

2. This study was limited to middle- and lower-class kindergarten-age children.

Assumptions

The assumptions that were basic to this study are as follows:

1. It was assumed that the subjects in this study are representative of a larger population of middle and lower social class preschool children in southern urban areas and possibly of the broader population.

2. It was assumed that the tests of creativity measure aspects of creative aptitudes.

3. It was assumed that the leadership observation schedule measures traits related to leadership behaviors.

Definition of Terms

For the purpose of clarifying the meanings of specific terms used in this study, the following words were defined:

Creativity--a process of freely perceiving simi-
larities and differences, making new associations,
reorganizing perceptions, seeing the reality of the moment
and forming one's judgement, and of communicating and acting
appropriately (Anderson, 1959, pp. 100-101).

Creative potential--capacity of bringing about a
possible creative performance due to one's personality
structure.

Creative performance--what an individual actually
produces (Schmidt, 1968, p. 15). In this study, such per-
formance is measured by the Unusual Uses Test, The Picture
Construction Test, and The Product Improvement Test of the
Torrance Tests of Creative Thinking. It is scored in terms
of fluency, flexibility, and originality.

Creative fluency--the ability of spontaneously pro-
ducing a quantity or a number of ideas.

Creative flexibility--the ability of spontaneously
producing a variety of ideas.

Creative originality--the ability of producing novel
and unique ideas.

Leadership--a concept that is applied to the situation
when a child gives direction, command, order, request, or
persuasion, etc., to other children over whom he has
influence and from whom he gets cooperation and submission.

Successful leadership--a child is perceived as dis-
playing successful leadership when his "leadership behavior"

acquires the compliance, performance, submission, and/or imitation of another child or children.

Leadership approaches--a child is perceived as displaying leadership approaches when he attempts to command, direct, order, request, persuade or demand the cooperation of another child or children. This also includes a child's attempt to initiate new activities and/or new ideas.

Followership--a concept applied to the situation when a child takes directions or orders from another child or children. He imitates the behaviors and/or conforms to the desires and directions of other children.

Submissive followership--a child is perceived as displaying submissive followership when he submits to, accepts, performs, or imitates according to another child or children's leadership approaches.

Unsubmissive followership--a child is perceived as displaying unsubmissive followership when he either: (1) ignores or does not comply to another child or children's leadership approaches but continues what he is doing; or (2) leaves or does not join a group when another child initiates a leadership approach.

Group--a group is two or more children engaging in the same activity.

Lower-class children--children who were enrolled in the Head Start Programs of the Greensboro Public Schools.

<u>Middle-class</u> <u>children</u>--children who were enrolled in the kindergarten at the N. C. Hebrew Academy at Greensboro, the Holy Trinity Church and the West Market Street Methodist Church sponsored kindergartens.

REVIEW OF LITERATURE

The following review of literature is pertinent to this study. It is organized under three major categories: Creativity, Leadership, and Social Environment.

Creativity

There is a growing interest in research pertaining to creativity. Creativity has been studied by many researchers in a variety of disciplines. Creativity has also been interpreted in a diversity of ways, as each researcher tends to interpret creative process with reference to his own background and experience (Schmidt, 1969, p. 6).

Definition and Concept of Creativity

There are a variety of definitions concerning creativity, although no specific theory is in existence. Most of the definitions have been operationally defined. May (1959) defined it as the process of "bringing something new into birth (p. 57)." Rogers (1959) defined creativity in terms of process and stated that it

> . . . is the emergence in action of a novel rela-
> tional product growing out of the uniqueness of the
> individual on the one hand, and the materials,
> events, people, or circumstances of his life on the
> other (p. 71).

To Haeffele (1962) creativity is the ability to make new combinations of social worth. Schactel (1959) suggested

that creativity is basically social. The motivation of the creative individual comes from man's basic need to interact with the world. The need to strive to relate to others, to objects, and to the unfamiliar.

The consensus of all these definitions is that creativity is a resultant of something original, new, or different. It, too, refers to something that is of social significance. Another element that is used to define creativity is self-actualization. Maslow (1954), who studied in terms of such an element, defined creativity as special talent creativeness and self-actualizing creativeness. To him, self-actualization means ". . . man's desire for self fulfillment, namely, the tendency for him to become actualized in what he is potentially (pp. 91-92)." Creativity does not necessarily have a physical product, but a composite of activities, processes, and attitudes. In studying self-actualizing people, Maslow (1959) recognized the significance of the relationship between self-actualization and creativity. He noted that creativity

> . . . springs much more directly from the person-ality, which showed itself widely in the ordinary affairs of life, and which showed itself not only in great and obvious products but also in many other ways, in a certain kind of humor, a tendency to do anything creatively . . . (p. 35).

Schmidt (1969) believed creativity is applicable to all human behavior. Stewart (1956) in clarifying the broader definition of creativity stated that creativity is

found in everyday life. To him the association of "two
well-known objects or ideas in a new way may obtain some-
thing new, and this is creative (p. 32)."

The concept of creativity is defined by Anderson
(1959) in the following manner:

> Creativity is to live with one's sharpest percep-
> tions, with the greatest freedom to see similarities
> and differences, make new associations, reorganize
> perceptions to see the reality of the moment, and on
> one's own judgement communicate and act appro-
> priately (pp. 109-110).

Taylor (1969) concluded that the definitions of crea-
tivity fall into five levels or clusters. The following
is a description of the five levels:

1. Expressive creativity. The most fundamental
   form of creative behavior is described as
   expressive spontaneity since the behavior is
   free from prior training and is manifestly
   unrehearsed. The most important characteristics
   of this type of creativity are spontaneity and
   freedom which form the foundation upon which
   more creative talent develops. It may be illus-
   trated by the expressiveness of young children,
   brain storming and expressive Psycho-drama.

2. Productive creativity. When the spontaneous
   acts of children or adults are polished with
   skill and education the natural behavior may
   become inhibited but the finished products can
   be described as resulting from productive skill.
   The majority of the definitions are of this
   order. The emphasis is on producing. The
   object produced, although not discernably dif-
   ferent from other similar objects, requires a
   certain degree of mastery over the environment,
   of craftsmanship; it is a technological pro-
   ficiency.

3. Inventive creativity. When a person exceeds
   mere skill and can manipulate concrete elements
   in the environment ingenously, or discovers and
   combines parts of the environment to solve

problems, the form of creativity described is inventive creativity. Here, emphasis is placed on efficiency and ingenuity with available materials and ideas. The individual produces some new items, but the limitations are that no new principle has been produced. Existing materials or ideas are put together in a new way.

4. Innovative creativity. This type of creativity involves relevant and unique variations, modifications, adaptations of an unique idea into an independent creative end-result. A substantial modification is made in an existing principle which requires a great deal of cognitive flexibility.

5. Emergentive creativity. The most original ideas which are maximally abstract and unapplied require emergentive originality. A principle or an assumption, around which new schools flourish, emerge at a most fundamental and abstract level. What is involved is an ability to absorb the experiences which are commonly provided and from this produce something that is quite different. This is the highest creative level.

Other writers also define creativity in terms of levels of the product. For instance, Maslow (1962) discussed creativity under three levels: Primary, Secondary, and Integrated. By Primary Creativity it is meant that which comes out of the unconscious, easily, spontaneously as an expression of an integrated individual. By Secondary Creativity it simply means the consolidation and the extension of other people's ideas. A great deal of productions are of this level. By Integrated Creativity it is meant combining the use of the primary and secondary creativity, coupled with the work of art of philosophy and science.

In the Michigan studies of creativity, Wilson et al. (1954) using factor analysis identified the following creative thinking traits:

1. verbal comprehension
2. numerical facility
3. perceptive speed
4. visualization
5. general reasoning
6. sensitivity to problems
7. word fluency
8. associated fluency
9. ideational fluency
10. adaptive flexibility
11. spontaneous flexibility
12. originality
13. a synthesis factor-speed, strength and flexibility of closure
14. redefinition (pp. 297-311)

Creative Personality

In describing the creative personality, Guilford (1950) found that creativity is a function of the total personality of an individual. After considerable modification Guilford (1962) had included creativity in a broader framework of intellectual activity, called "Structure of the Intellect." McKinnon (1960) described the creative persons as: intelligent, original, independent in judgement,

thought, and action; perceptive and open to experience;
intuitive; interested in the theoretical and aesthetic; and
inclined to prefer the unfinished, the disordered, and the
complex (pp. 187-191).

Rhodes (1958) also believed that creative ability
encompasses the total function of the person. Besides intel-
lectual ability other variables are "temperament, training,
previous cogitation, personal freedom, status security,
education, and endurance for sustained effort (p. 23)."

Maslow (1962) believed that in creativity personality
is a more important factor than achievement. For self-
actualizing creativeness it can be generalized that crea-
tivity is characterized by boldness, courage, freedom,
spontaneity, perspicuity, integration, and self-acceptance.
Rogers (1959) suggested that man's tendency to actualize
himself is basic to creativity.

Creative personalities share some of the same traits
as leadership personalities. As reported by Stein (1953),
creative subjects were rated by their colleagues as more
realistic, consistent in their desires for rewards, asser-
tive, and possessive of leadership ability.

In describing self-actualized creativity, Maslow
(1956) also noted its relation to the universal naive
creativeness of young children. It is the tendency to do
everything creatively. The individual uses the fresh, new,

concrete, ideographic, generic, abstract, rubricized, categorized, and classified.

Taylor (1969) viewed creativity as involved in a "variety of processes and perceptions directed at altering and reorganizing a significant portion of the environment uniquely and relevantly . . . (p. 1)." Transaction is a level of behavior, which is an

> . . . independent or conforming behavior . . . if the source of behavioral initiation stems from the person's inner world of perception and thus unpredictively but creatively alters the environment . . . following a pattern of o-e-s (p. 3).

Creativity is not the solution but rather the reorganization of the environment in accordance with one's pattern of perception.

Taylor (1971) assumed that creativity involving a transacting personality and transactional creativity is relevant to creative leadership behavior. Creative leadership is perceived as that which "involves designing a stimulated followership environment by transforming generic problems into fruitful outcomes (p. 1)."

Creativity Tests

The tests of creativity designed for use with the preschool age children have been very limited. Reliability of these tests is often controversial and often contradictory as indicated by Goldman (1964) in his report of the Guilford Test of Creative Thinking and the Minnesota Test of Creative

Thinking (The Torrance Test). There are tests developed for special purposes, such as research or dissertations. Among these the Starkweather Test (Starkweather, 1964) and the Savoca's Construction Test (Savoca, 1965) has been used by other researchers on a limited basis. These tests are not standardized.

In 1962 Getzel and Jackson reported on a test which they had devised to measure: (1) the ability to structure incomplete perceptual stimuli, (2) quantity of problem derived from numerical data, (3) variations of associations to stimulus words, and (4) original and humorous responses to described stituation. Reliability coefficients of internal consistency varied from .80 to .87.

The Torrance Tests of Creative Thinking is more widely investigated than other tests of creativity. They consist of test activities in four batteries, Verbal Form A and B and Figural Form A and B. Both the figural and verbal forms can be used from kindergarten up through graduate school. The tests are evaluated in terms of fluency, flexibility, originality, and in some cases elaboration.

Several test-retest studies had been conducted. In the first study 118 fourth grade, fifth grade and sixth grade children were tested. The Verbal and Figural Tests were given two weeks apart. The reliability coefficients obtained were: Verbal Fluency .93; Verbal Flexibility .73; Figural Originality .85; and Figural Elaboration .83

(Torrance, 1966c). The second study involved fifty-four fifth graders involved in a creative writing experiment. The result of this study showed that the reliability coefficients ranged from .50 for figural fluency to .87 for verbal fluency.

Other test-retest studies vary greatly in reliability coefficients. Numerous studies have been conducted in attempting to determine the validity of The Torrance Tests of Creative Thinking. Much of the research involved construct and concurrent validity of the tests. Very little work has been done regarding predictive validity.

Social-Economic Status, Sex and Racial Differences

According to Torrance (1971) The Torrance Tests of Creative Thinking was made to "include only things that were common to all children or strange to all children (p. 73)." He and his associates found that economically deprived, black, and other minority culture children seemed to perform as well as children of any other group.

In 1971, Torrance reviewed past studies using his Creative Thinking Tests. He showed that there is no significant difference in terms of socio-economic status, racial background and intelligence. Among the few cases showing slight but insignificant differences, they were in favor of the low socio-economic groups.

Comparing children of various socio-economic levels, Smith (1965) found that the higher levels were substantially superior to the lower socio-economic children in verbal factors of creative thinking. On non-verbal factors the reverse was true. The lower socio-economic group children were more superior on non-verbal originality.

Based on research findings, Rogers (1967) asserts that disadvantaged children are more likely to be "fluent" producers of ideas than advantaged children, if they were taught the creative process. Often studies of deprived children emphasized their verbal disabilities. Some indications are that disadvantaged children are more spontaneous, less conforming, more independent, and more developed in motor skills (Ausubel and Ausubel, 1963, Reissman, 1962).

Taylor (1962) talked about the "untapped" creative potential in the culturally deprived children. By conducting word association tests, he found that they responded in less conventional but more unusual, unique, original and independent responses than the more privileged children. Consequently, he maintained that they must be more imaginative on the verbal level.

Reid (1959) administered creativity measures to a group of seventh graders, the result indicated that creative children tended to be more emotional, self-confident, self-critical, and less anxious than non-creative children. He was one of the few researchers that found sex as a significant

variable. For he found that creative girls seemed to be more sensitive, friendly, timid, and kinder than the creative boys. While the girls seemed more willing to accept standards, the boys were more independent, self-confident, competitive, and reacted more to authority than the girls.

Moreover, it is found that social pressures have an effect on creativity. Individuals must decide how they could face social pressures. Smith (1965) believed that a child, who gives creative productions continuously, must decide whether to sacrifice his creativity or learn to accept the frequent external denunciations. To the former, that is, to sacrifice his creativity, it might result in lowered self-concept, learning difficulties, behavior problems or psychopathological disorders. To the latter, that is, to accept external denunciation, it might result in loneliness, conflict, and restricted contact with the environment.

McKinnon (1960), in analyzing the history of creative adults, reported that during their childhood there seemed to be a lack of imposed control on them so that they could have a great deal of personal autonomy. In studying cultural pressures on children, Torrance (1968) asked the children to write imaginative stories, and studied their responses to determine the effect of external pressures on creativity. He found that urban cultures with many social sanctions were

more a hindrance against creative thinking than rural cultures.

Drevdahl (1956) also found the effect of social pressures on the creativeness of a group of creative and non-creative college students. He found that the creative person often stood alone because his social environment would not accept his behavior and performance.

Intelligence

As to IQ, most studies did not find any difference between high and low IQ subjects in their creativity scores (Torrance, 1966c). Covington (1969) among others found no difference between black and white subjects on any measure of the Torrance Tests of Creative Thinking, although the mean IQ of the whites was 17 points higher. Ross (1963) also found no significant difference between high and low socio-economic fifth graders, in spite of the fact that the mean IQ of the higher socio-economic class children was considerably higher.

Leadership

Leadership can be viewed as a social role played by an individual in a special situation. When two or more children engage in any activity together, leadership characteristics can be detected in the process of give-and-take in terms of leading and following. Leadership requires

membership in a group. Allport (1924) conceives of leader-
ship in terms of personal social control.

Leadership Behavior and Characteristics

Stogdill (1968) noted that in attempting to explain
leadership traits and situational factors theorists had
neglected the interactive effects of individual and situa-
tional factors. Westburgh (1931) suggested that the study
of leadership should include the affective, intellectual,
and action traits of the individual and the situational con-
ditions. Gibb (1954) held that

> . . . leadership is an interactional phenomenon
> arising out of the process of group formation. The
> emergence of a group structure, whereby each of its
> members is assigned a relative position within the
> group depending upon the nature of his interactional
> relations with the other members, is a general
> phenomenon and a function of the interrelation of
> individuals engaged in the pursuit of a common goal
> (p. 97).

Moreover, leadership is required as a social role, a
concept supported by research in adult leadership. Cowley
(1928) defined leader as "an individual who is moving in a
particular direction and who succeeds in inducing others to
follow after him (p. 145)." Pigors, according to Hemphill
(1949), explained that leadership is a "process of mutual
stimulation by successful interplay of relevant differences,
controls human energy in the pursuit of a common cause
(p. 41)." Hemphill (1949) defined leadership as the
behavior of an individual when he is involved in directing
group activities.

Bundel (1930) regarded leadership as "the act of inducing others to do what one wants them to do (p. 339)." Others looked at leadership, in terms of influence. For instance, Nash (1929) suggested that leadership implied influencing change in the conduct of people. Haiman (1951) described direct leadership as an interaction process in which an individual, usually through the medium of speech, influences the behavior of others toward a particular end.

Leadership has been defined as an act by various researchers. Hemphill (1949) defined leadership as the behavior of an individual while involved in directing group activities. Pigors (1935) defined leadership as a process of mutual stimulation which, by the successful interplay of individual differences, controls human energy in the pursuit of a common cause.

Leaders were identified as those who initiate inter-action and/or structure. Munson (1921) observed that leadership is the creative and directive force of morale. Bundel (1930) regarded leadership as "the art of inducing others to do what one wants them to do."

Leadership is often viewed in its relation to the group structure. Leadership is the quality of a person's role within a particular and specific social system. Such a view finds expression in Lewin's Field Theory (Baldwin, 1968), that an individual's behavior changes under the influence of the social field or the psychological environment. Baldwin

(1968) further explained that the

> . . . psychological environment is a representation
> of the physical environment. However: it pictures
> how the external environment impinges on the person
> or determines his behavior (p. 91).

Merei's (1949) experimental study of group leadership

offered further evidence of its validity. He found that

teacher-identified leaders became weak when placed in a

new group with a tradition stronger than the leader himself.

Although the leader might still be a stronger character than

any one group member, under the pressure exerted by the

group his behavior was subjected to the impact of the future

of the group tempered with the kind of person or the charac-

ter of the new leader. The teacher-identified leader would

then either be assimilated, or destroy the group's tradi-

tions and introduce new ones, or accept group traditions and

lead within that framework. Thus, he assumed leadership

by introducing variations and by adding new elements into

the existing structure.

Preschool Leaders

Leaders have been studied in terms of numerous

variables and behavior characteristics. Nursery school

leaders had been observed to be initiating more contacts

than other children due to their ability to suggest and

organize group activities. Parten (1933) found that

nursery school leaders possessed the leadership qualities

or characteristics similar to those leaders of other age

groups. That is to say, they displayed initiative and organizing abilities and conformed to the rules of the group in which they played.

Having studied a preschool "gang," Beaver (1929) found that a leader was an individual who could pull and hold a group together. She indicated that a leader was imaginative, enticing, resourceful, and capable of initiating new activities. The image of the leader was imitated and modeled. In attempting to gain leadership a preschool leader "calls; he invites, he announces what he is doing (Beaver, 1929, p. 113)." A leader sometimes plays by himself alone, but he can draw other children to play a game with him. He makes many social contacts, is sympathetic, bossy, and likes to tell others how to do their duties. He is persuasive, diplomatic, and ingenious.

Nursery school leaders have been observed to be capable of initiating more contacts than other children due to their ability to suggest and organize group activities. One of the most significant studies of leadership among preschool children was conducted by Parten (1932). In that study of social participations of preschool children in group activities, leadership was conceived of by her as "a function of the personnel of the group and of its activities, as well as of each individual child (p. 430)."

Goodenough and Tyler (1959) suggested that irrespective of age, leaders had the same characteristics. They

reported that the most important attributes of leaders are the "ability to recognize the special abilities and limitations of others (p. 237)," and the versatility in devising roles which would fit others' characteristics.

The manifestation of leadership in relation to age is contradictory. Stogdill (1948) related that Pigors (1935) observed that leadership traits did not appear in children before two or three years old. When they did assume the leadership roles, they became dominant. He found that active leadership role seldom appeared before nine or ten years old when noticeable social development took place in the formation of groups and gangs. To Pigors there are four necessary stages in the development of leadership in children. They are: (1) development of determination and self-control; (2) grasp of abstract and social control; (3) awareness of personalities; and (4) sufficient memory span to pursue remote goals rather than immediate objectives.

In contrast to her earlier studies of infants, Buhler (1931) in observing infants concluded that beginning as early as six months an infant demonstrated "leadership" tendencies. She observed that some infants were dominating by intimidating, overcoming, or attacking their companions; while others by inspiring, encouraging, or leading. These traits could be identified as early as from eight to ten months and as long as the child grew and developed. These early "leadership" tendencies were characterized by:

(1) the child leader's not losing his balance in the presence of the other infant whom he might even control, and (2) his lead in initiating and exhibiting gestures or activities which were modeled or imitated.

In her research in children's social behavior, Arrington (1943) did not find that leadership increases with age. Reviewing leadership research Stogdill (1948) found that age as a determinant of leadership was not conclusive, for he found some leaders either younger than their followers or older than their followers.

IQ, Socio-economic Status, Sex and Racial Differences

As to IQ, most studies indicated that leaders on the average had higher IQ than their followers. However, some studies show that IQ is not an absolute requirement for leadership (Stogdill, 1948). It was interesting to note that Hollingworth (1926) in studying gifted children recognized that although the leader was more intelligent than the average of the group, he was not too much more intelligent. It was assumed that if one is too intelligent he has very little chance to be a leader in a group of children with average intelligence; for he may have difficulties in communicating different interests and goals with the group.

Terman (1904) in his study of the "psychology and pedagogy" of leadership among school-age children showed

that the leader on the average was

> . . . larger, better dressed, of more prominent
> parentage, brighter, more noted for daring, more
> fluent of speech, better looking, greater reader,
> less emotional and less selfish than the automatons
> (p. 433).

Stogdill (1948) stated that there was an indication
that leaders tended to come from a specific socio-economic
background more advantaged than that of his average fol-
lowers. Keller (1947), in reviewing literature pertaining
to leadership, found leaders to be more superior than their
associates in intellectual ability, certain physical
characteristics, various personality traits, socio-economic
status, and their scholastic standing.

Stogdill (1968) reported Jarojaiye's investigation of
the patterns of friendship and leadership choices in a mixed
ethnic elementary school. The children's age ranged from
8-11 years. It was found that although friendship choices
were dependent on sex, leadership choices were independent
of sex. Although choices of friends were influenced by
ethnic affiliations, leadership choices appeared not to be
affected by ethnic grouping. It was also found that all
children who were chosen as leaders achieved high status in
the friendship test. Children in choosing leaders emphasized
ability as an important factor.

Social Environment

It has been suggested that social environment has a direct influence on the creative thinking abilities and creative performance of children. It is relevant, therefore, to take a quick look at child-rearing practices among middle and lower class families.

Child-rearing practices among middle and lower classes differ in some respects. Middle class parents are more permissive of the child's behavior within the family situation (Ausubel, 1958; Sears, Maccoby, & Levin, 1957). Ausubel (1958) pointed out that lower class parents are more permissive of their children's behavior outside the home. Lower class children are freer to come and go, to choose their friends, and to explore in the street.

Sears, et al. (1957) found diverse methods of behavior control employed respectively by parents of lower and middle classes. The middle class parent is concerned about the necessity of developing an internal control mechanism in the child. He is supportive, warm and often uses withdrawal of love to control the child's behavior. However, the lower class parent controls by imposing restraints, punishment, and withdrawal of privileges. Sears et al. (1957) pointed out that if a child was brought up by a warm mother, he would mature more rapidly in social behavior but tend to be controlled by his mother. Physical punishment loses its effectiveness over time. Thus one is

led to conclude that the middle class mother exerts more influence on children's behavior than the lower class mother. Ausubel (1958) was in agreement with the generalization that lower class children achieved "desatellization" and independence earlier than middle class children.

There are differences in child-rearing practices between sexes. These differences are the outcome of cultural norms. Ausubel (1958) stated that boys are expected to be more aggressive, rebellious, competitive, nonconforming, and uncooperative; whereas girls are expected to be more sensitive, obedient, cooperative, and submissive to authority. Sears et al. (1957) also pointed out that there are differences in using punishment techniques to deal with boys and girls. Boys and lower class children are more often punished physically, while girls are more often penalized through the withdrawal of love, a technique similar to the middle class method of punishment. Girls are thus more susceptible to parental control. Ausubel (1958) concluded that girls go through much longer "satellization" than boys as a result of differences in their treatment by parents.

CHAPTER III

PROCEDURE

The present study was undertaken to investigate the leadership and creative behaviors of preschool children.

Subjects

The subjects for this study were 48 kindergarten age children of both sexes in equal number from the middle and lower socio-economic classes. Each socio-economic class was represented by 12 boys and 12 girls. The subjects for the lower class group were chosen from the Greensboro Public School's Head Start Programs. The subjects for the middle class group were chosen from the kindergarten programs of the North Carolina Hebrew Academy, the Holy Trinity Episcopal Church, and the West Market Street Methodist Church. To be designated children of the lower socio-economic group, the head of the household's occupation must have come under one of the following categories: operative and kindred workers; private household workers; service workers, except private household; laborer; or none of the above, but currently receiving public welfare. To be designated children of the middle socio-economic group, the occupation of the head of the household must have been of one of the following groups: clerical and kindred workers; managers, officials, and

proprietors, or professional, technical and kindred workers (Kalh, 1957). Discussion with the kindergarten personnel revealed that the Head Start subjects could be designated as lower class subjects, while subjects from the church and Hebrew Academy's kindergartens could be designated as middle class subjects with little or no error.

A letter was sent to the subjects' parents informing them of the operation of the research and asked for their permission to have their children participate in this research. A child was not included as a subject if his parent objected.

Instruments

Instruments for data collection were presented in two parts: (1) Instruments for measuring creativity, and (2) Instrument for measuring leadership.

Instruments for Measuring Creativity

The Picture Construction Test, the Unusual Uses Test, and the Product Improvement Test (Torrance, 1966), of The Torrance Tests of Creative Thinking were used for the measurement of creative performance of the subjects.

1. The Picture Construction Test (Torrance, 1966). The child was asked "to think of a picture in which the given shape made of colored paper with an adhesive backing . . . is an integral part (p. 14)."

2. <u>The Unusual Uses Test</u> (Torrance, 1966c). The child was asked to think of as many interesting and unusual uses for cardboard boxes as they could.

3. <u>The Product Improvement Test</u> (Torrance, 1966c). The child being tested was asked to think of the most interesting and unusual ways of changing a toy elephant (6" tall) so that it will be more fun playing with it.

Each test was administered to each subject individually. <u>The Picture Construction Test</u> was scored for flexibility and originality behaviors. <u>The Unusual Uses Test</u> and <u>The Product Improvement Test</u> were scored for fluency, flexibility, and originality behaviors. The scoring manual provided directions for scoring. In brief:

1. The Fluency score--number of appropriate or relevant responses. (Fluency--the ability to produce quickly a quantity of ideas.)

2. The Flexibility score--number of different categories into which the responses fall. (Flexibility--the ability to produce a variety of ideas.)

3. The Originality score--number of unique ideas or responses. (Originality--the ability to produce unique ideas) (Torrance, 1966c, pp. 11-12).

<u>Instrument</u> <u>for</u> <u>Measuring</u> <u>Leadership</u>

<u>The Nursery School Leadership Observation Schedule</u> (<u>NSLOS</u>) was used in recording leadership behavior (Fu, 1970). The leadership scores were collected using the direct observation method. The <u>NSLOS</u> consists of three main categories of behavior: <u>Leadership Behavior</u>; <u>Followership</u>

Behavior; and <u>Other</u> <u>Behaviors</u>. Under the <u>Leadership</u> and

<u>Followership</u> <u>Behavior</u> categories there were 18 behavior

units respectively. The <u>Other</u> <u>Behavior</u> category was for

recording behaviors other than those listed as leadership or

followership (Appendix B).

Collection of Data

The <u>Picture</u> <u>Construction</u> <u>Test</u>, <u>The</u> <u>Unusual</u> <u>Uses</u>

<u>Test</u>, <u>The</u> <u>Product</u> <u>Improvement</u> <u>Test</u>, and <u>The</u> <u>Nursery</u> <u>School</u>

<u>Leadership</u> <u>Observation</u> <u>Schedule</u> were pre-tested with chil-

dren who were of kindergarten or younger ages, prior to

administering the tests to the subjects of this study.

The three creativity tests were administered to each

child individually. The three tests were administered and

scored by trained persons employed by the Center of Creative

Leadership: Creative Programs, at Greensboro, North

Carolina. Each test was scored by two scorers.

The <u>NSLOS</u> was used for observing the subjects during

free play periods. Each of the 48 children were observed

for four 5-minute periods by two constant observers. Each

observer observed the behavior of the same child simul-

taneously but independently. The children were selected for

observation at any given time by a random card sorting pro-

cedure. No child was observed more than once a day.

A child's score on any behavior unit was the total

number of instances of the occurance of that behavior during

the observation period. His score for total Successful
Leadership, Unsuccessful Leadership, Submissive Follower-
ship, or Unsubmissive Followership was the total number of
observations of all the behavior units belonging under the
particular behavior category concerned. For example, there
might be recorded for one child under Successful Leadership
three instances of "verbally directs act/behavior for imita-
tion," two instances of "orders/commands other children's
activity," and four instances of "creates and assigns
activities/roles to children." His score for Successful
Leadership Behavior would be the sum of these observations,
or nine points. The final score for a given child there-
fore was (1) the frequencies of occurrences of each of the
behavior units, and (2) the sums of the four observations of
those behavior units that are listed under Leadership
Behavior and Followership Behavior respectively.

The Other Behaviors category was not included in the
data analyses because the present study only dealt with
leadership and followership behaviors. The Other Behaviors
category was put in the NSLOS account for the time children
spent in activities other than those under study.

Treatment of Data

Despite Torrance's (1966c) statement that the Torrance
Tests of Creative Thinking are suitable for children of
kindergarten age, and that many researchers have made use of

them in their studies of preschool children, there are no norms to use in the study of this age group. This fact is not critical for this study, however, since the sole interest in this study was in correlating the scores of the subjects, and in comparing scores of different sub-groups (i.e. females vs. males, middle class vs. lower class) on the same scales, not in comparisons with children of other ages, or different geographic areas.

The scores of all 48 subjects were converted to standard scores by the method of dividing each score's deviation from its mean by the standard deviation of that set of scores. This produced the same mean and standard deviation for all sets of scores, but did not affect correlations, or comparisons between various sub-groups.

A 2 x 2 x 2 factorial analysis of variance was used in analyzing the relationship of sex and socio-economic status to creativity and leadership. This design featured independent groups in terms of social class and sex, but matched, or nested, scores for Creative Flexibility, Fluency, or Originality. The method of changing the Creativity measures to standard scores produced a mean of zero for each set of scores. In the analysis of variance the main effect for comparing one scale with another could not be significant since all grand means were zero. The interaction terms (such as sex by different Flexibility scales) were free to vary however, and these were the terms of interest.

CHAPTER IV

RESULTS AND DISCUSSIONS

This chapter is arranged in terms of the findings in
regard to the leadership and creativity behaviors of pre-
school boys and girls and the discussions of these findings
and results.

Analyses of Variance

The mean scores for all the variables are shown in
Table 1. These means of the scores are presented in raw
score form. The direction of differences for these mean
scores will, of course, be the same as those found with the
z scores used in the analyses. These mean scores are pre-
sented in terms of the various subgroupings as indicated in
the crosswise columns.

The results of the three way analysis of variance of
the creative Fluency scores on the creativity tests is pre-
sented in Table 2. It can be noted that there is a signifi-
cant difference between the mean scores of the children from
the middle and lower socio-economic groups ($F = 4.00$,
$p < .05$). The mean scores for creative Fluency 1 and 2 are
8.06 and 5.67 for the middle and 7.00 and 3.23 for the
lower socio-economic groups, respectively. Thus, there is
significant social class difference in the creative Fluency

TABLE 1

THE MEAN SCORES FOR THE TWELVE VARIABLES

Variables	Total Group	Total Girls	Total Boys	Total Middle Class	Total Lower Class	Middle Class Girls	Lower Class Girls	Middle Class Boys	Lower Class Boys
1. Successful Leadership	9.23	7.85	10.60	10.36	8.19	7.79	7.92	12.75	8.40
2. Unsuccessful Leadership	2.00	1.29	2.71	2.21	1.79	1.71	9.87	2.71	2.71
3. Submissive Followership	4.37	4.46	4.29	5.69	3.06	6.21	2.71	5.71	3.42
4. Unsubmissive Followership	1.76	1.92	1.60	1.38	2.15	1.25	2.58	1.50	1.71
5. Fluency 1	7.51	6.79	8.23	8.06	7.00	7.58	6.00	8.46	8.00
6. Fluency 2	4.57	3.83	5.31	5.67	3.23	4.42	3.25	6.92	3.71
7. Flexibility 1	4.79	4.37	5.21	4.73	4.85	4.71	4.04	4.75	5.67
8. Flexibility 2	2.84	2.48	3.21	3.21	2.45	2.54	2.42	3.87	2.54
9. Originality 1	1.86	1.40	2.53	2.63	1.67	1.87	0.92	2.25	2.42
10. Originality 2	1.19	1.08	1.29	1.67	0.71	1.79	0.57	1.54	1.04

TABLE 1 (continued)

THE MEAN SCORES FOR THE TWELVE VARIABLES

Variables	Total Group	Total Girls	Total Boys	Total Middle Class	Total Lower Class	Middle Class Girls	Lower Class Girls	Middle Class Boys	Lower Class Boys
11. Originality 3	1.86	1.31	2.42	1.77	1.79	1.12	1.50	2.75	2.08
12. Elaboration	6.08	5.75	6.42	5.34	6.56	4.71	6.79	6.50	6.33

TABLE 2

ANALYSIS OF VARIANCE OF THE
CREATIVE FLUENCY SCORES

Source	SS	df	MS	F	p
Social Class	4.54	1	4.54	4.00	<.05
Sex	3.80	1	3.80	3.34	
Social Cl. x Sex	0.09	1	0.09	0.07	
Error I	49.96	44	1.14		
Scales	0.00	1	0.00*		
Social Cl. x Scales	0.55	1	0.55	0.71	
Sex x Scales	0.00	1	0.00	0.00	
Soc. Cl. x Sex x Scales	1.11	1	1.11	1.43	
Error II	34.00	44	0.77		

* This term could not vary appreciably because of the
  conversion to z scores.

scores of these preschool children in favor of the higher

social class groups. However, sex, the two Fluency scales,

the interaction between social class and sex, and the inter-

action between social class, sex and scales are not signifi-

cant.

According to the above findings, creative fluency

behavior of these preschool children is related to their

social class membership. Since creative fluency is measured

in terms of the ability to produce a quantity of ideas, it

is in turn dependent upon the verbal-oral language of the

respondent (Torrance, 1966c). Creative ability is also dependent upon the exposure to a variety of divergent experiences.

It is generally conceded by researchers, such as Loban (1955) and Bernstein (1966), that there is a deficiency in the use of language codes by children of the lower socio-economic classes. This deficiency is the result of language environment at home. Middle class children are, for the most part, thought to be raised in a more enriched language environment and they are thus more proficient in their language skills.

The language environment in the home has a marked influence on the language acquired by the child. The middle class family is generally assumed to be more elaborate in language usage which enhances the language acquisition and language skills of the preschool children from the middle class subculture. The children from the lower class sub-culture, however, are thought to be raised in families where language usage is restricted, and are thus less skilled in their use of language. The measurement of creative <u>Fluency</u> scores is based on verbally produced ideas. Thus, language plays an important part in determining the verbal output of the children. The restricted language ability of the lower class children narrows and lessens the chances for producing a large quantity of ideas verbally. This in turn effects

the lower class children's creative <u>Fluency</u> scores and gives the middle class children an advantage.

The analysis of the creative <u>Flexibility</u> scores is presented in Table 3. It can be noted that there are no significant differences in the <u>Flexibility</u> scores of all of these children as a group in terms of sex, social class, or any of the interactions. <u>Creativity Flexibility</u> is measured by the ability to produce a variety of ideas (Torrence, 1966c). This type of ability might be difficult for the preschool children to acquire irrespective of sex and social class differences, since these young children have a limited amount of experience and they are still in the stage of development where divergent and differentiated thinking are at a very primitive and crude stage (Phillips, 1969).

TABLE 3

ANALYSIS OF VARIANCE OF THE CREATIVE
FLEXIBILITY SCORES

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Social Class	0.68	1	0.68	0.59	
Sex	3.77	1	3.77	3.29	
Social Cl. x Sex	0.02	1	0.02	0.01	
Error I	50.44	44	1.15		
Scales	0.00	1	0.00	0.00	
Social Cl. x Scales	1.25	1	1.25	1.58	
Sex x Scales	0.00	1	0.00	0.00	
Soc. Cl. x Sex x Scales	3.02	1	3.02	3.81	
Error II	34.82	44	0.79		

In studying the mean Flexibility scores in terms of sex differences (Table 1), it is interesting to note that boys in general scored higher than girls. The mean scores for the Flexibility Tests 1 and 2 are 5.21 and 3.21 for boys and 4.37 and 2.48 for girls respectively. This will be discussed later along with the discussion on the creative Originality scores.

There is an indication that creative test performance is influenced by a person's experience in life. Wallach (1970), in studying the test results of creative thinking tasks across age groups, found that there is an increase in the creative performance level with increase in age. This increase in performance level could be a reflection of the cumulative impact of various sources of information to which a child in our culture is exposed over a period of time. This is comparable to the age-related increases that would be expected for this reason in other kinds of cognitive performance. If this is so, The Torrance Tests of Creative Thinking may be too difficult for kindergarten age children. For although these creativity tests were constructed for testing and measuring creative aptitude from kindergarten through college age groups (Torrance, 1966c), they may be covering too wide an age span. Older children and youths have more training coupled with more extended and diversified experiences which serve as reference in responding more adequately to creativity test.

Speculations that experience and training might play a role in creative performance are also brought up by Torrance (1961) and Yamamoto (1962). Cartledge and Krauser (1963) trained first graders to solve certain problems. The trained subjects scored significantly higher than the untrained subjects in The Torrance Tests of Creative Thinking. In another instance, Crutchfield and Covington (1963) tested fifth graders who had gone through a self-instruction program in problem solving skills. These children performed significantly better than their peers in responding to creativity tasks. Although the above studies were of older children, it can be assumed that experience and training do play a role in solving creativity test problems. The children of kindergarten age might be unfairly evaluated when they are evaluated on the same bases as older children.

The analysis of the creative Originality scores is reported in Table 4. A significant sex difference (F = 5.32, p < .05) was found in this creative trait. The mean scores of Originality 1, 2, and 3 are 2.53, 1.29, and 2.42 for the boys and 1.40, 1.08, and 1.31 for the girls respectively (Table 1). The mean scores further supported the analysis in that the sex difference reported in Table 4 is significant. It identifies the fact that boys show more original behaviors than girls.

The F ratio for social class of 3.92 was close to that for significance (4.06). Thus, there was a suggestive,

TABLE 4

ANALYSIS OF VARIANCE OF THE CREATIVE
ORIGINALITY SCORES

Source	SS	df	MS	F	p
Social Class	4.09	1	4.09	3.92	
Sex	5.55	1	5.55	5.32	<.05
Social Cl. x Sex	0.71	1	0.71	0.68	
Error I	45.89	44	1.04		
Scales	0.00	2	0.00	0.00	
Social Cl. x Scales	2.88	2	1.44	1.61	
Sex x Scales	0.00	2	0.49	0.54	
Soc. Cl. x Sex x Scales	2.55	2	1.28	1.43	
Error II	78.64	88	0.89		

but not significant difference between social classes. The
mean scores for Originality 1, 2, and 3 are 2.36, 1.67, and
1.77 for the middle class children and 1.67, 0.71, and 1.79
for the lower class children.

Creative originality is defined as the ability to
present unique and original ideas (Torrance, 1966c). The
difference in originality behaviors exhibited could be
resulted from the preschool children's ability to imagine,
to use language descriptively, as well as feeling free to
deviate from the usual and familiar in their responses to
the creative stimuli (Guilford, 1962).

The significant sex difference in the Originality scores and the almost significant sex difference in Flexibility scores need to be examined. Verbal or language skills play an important role in a child's creative performance. Generally it is conceded that boys lag behind girls in their language development (Sampson, 1959). If originality and flexibility are dependent upon language usage, girls should score higher than boys in these creative traits. However, in the present study this was not the case as boys scored higher than girls. Brewton (1968), in studying the creative thinking ability of young children, found that boys performed poorer than girls in verbal creative tests. This finding was in accordance with the generally conceded fact that girls are more advanced than boys in language skills.

In the present study, where boys scored higher than girls in creative, originality, and flexibility behaviors, some factor other than verbal/language skill must be involved. This could be a result of the amount of manipulation of the creative task stimulus objects by the subjects. Torrance (1971), in investigating the creative behaviors of children, found five-year-old boys to have produced significantly more original and flexible ideas than girls of the same age. He noted that on the basis of observation boys manipulated the stimulus objects more frequently while taking creativity tests than the girls did. He suggested that manipulation might help

the respondent in thinking and thus eliciting more responses. Furthermore, Torrance (1970) in observing the creative behaviors of children in socializing situations found that in manipulating the stimulus objects the children spent more time planning and cooperating their play activities. Planning behaviors are also a part of the creative thinking process.

The higher creative Originality and Flexibility scores produced by the boys in the present study could be a result of the differential treatment of boys and girls in our culture (Kagan, 1964; Torrance, 1971). Kohlberg (1966) in studying children's acquisition of sex role concepts concluded that young children through observational and cognitive processes come to recognize their gender or sexuality. Hartup and Zook (1960) found that during early socialization children acquire knowledge of the stereotyped male and female roles prevalent in their subcultures.

Social pressures encourage boys to be independent, assertive, not to conform, and to try new ideas (Hurlock, 1973; Kagan, 1964). Girls, on the other hand, are encouraged to be dependent, passive, and to inhibit urges (Kagan, 1964). This appropriate sex role learning might work against girls in expressing original and unusual ideas. Girls appear to learn earlier than boys to gain peer acceptance by avoiding being labeled as having "silly" or "screwy" ideas (Torrance, 1971). Girls might thus inhibit

their desire to express original or unusual ideas. Boys
who are highly creative are often selected by their peers
as having silly and wild ideas. They show more uniqueness,
inventiveness, and originality in their creative performance
than girls. They are more ready to verbally express origi-
nal or unusual ideas. Torrance (1963, 1970, and 1971) found
in his studies that boys from grades one to three were con-
sistently superior to girls in almost all creative thinking
tests. Although these sex differences were found among
school age children, the same reasons can be given for
explaining the sex difference in the creative performance of
the kindergarten age children in the present study.

Smart and Smart (1972) noted that there is a sex dif-
ference in creativity. Since creative achievements in
science and the arts have been made chiefly by men, not by
women, they conclude that boys have been given more
experiences which promote independent thinking. The Smarts
further noted that creative behavior is probably related to
this kind of thinking. Overemphasis on conforming to sex
role depress and/or stifle creativity in both sexes. Crea-
tive behavior requires both sensitivity and independence
(Torrance, 1967). The Smarts also suggest that sensitivity
is feminine and independence is masculine, as assigned
according to cultural definitions of sex roles. Another
component of creativity is freedom (Rogers, 1959). Boys and
girls who are creative must be given the opportunity to be

free to investigate, to explore, to experiment, and to use a
variety of tangible and intangible media (Torrance, 1967).

It is interesting to note that Torrance (1971) in
reporting the changes of creative behavior over the years
found that there is a trend for girls to perform creative
tasks in a way that deviates from the traditional stereo-
typed female roles. However, boys still score significantly
higher than girls in producing original ideas. The boys'
contributions of original ideas are still valued signifi-
cantly more highly by their peers.

Looking at Table 5 it is noted that there are no sig-
nificant differences in the Leadership scores of these pre-
school children in terms of sex, social class, or their
interactions. There is, however, a sex difference which is
so close to being significant that it is important to look
more closely at the scores reported. Leadership score for
the boys was 10.60, and for the girls 7.81 (Table 1). One
could suggest that there is a sex difference in that
generally boys exhibit more leadership behaviors than girls.
This was especially true of middle class children. In
Table 1, the mean scores presented are 12.75 for the boys
and 7.79 for the girls in the middle class. The difference
was less pronounced among lower class children as shown by
the mean score of 8.40 for boys and that of 7.29 for girls.
In the absence of significant analysis of variance results,
however, these facts are only suggestive.

TABLE 5

ANALYSIS OF VARIANCE OF THE LEADERSHIP SCORES

Source	SS	df	MS	F	p
Social Class	1.01	1	1.00	0.90	
Sex	4.36	1	4.36	3.90	
Social Cl. x Sex	0.10	1	0.10	0.09	
Error I	49.92	44	1.12		
Scales	0.00	1	0.00	0.00	
Social Cl. x Scales	0.08	1	0.08	0.09	
Sex x Scales	0.15	1	0.15	0.17	
Soc. Cl. x Sex x Scales	1.09	1	1.09	1.26	
Error II	38.01	44	0.86		

The absence of any significant social-class difference in Leadership scores (Table 5) could be attributed to the fact that leadership behaviors are valued by both social classes. Thus, leadership behaviors were exhibited to be almost at the same level by children from both social classes. The amount of leadership behavior exhibited may not be significantly different but there is the possibility that the types of leadership behaviors exhibited could be different. For example, middle class children may be more diplomatic in performing their leadership role due to their greater language proficiency and as a result of their adult models. Children from lower class families, however, may use

more physically aggressive or bully type behaviors. They frequently resort to the use of their physical prowess in making other children their followers. This can be assumed on the bases of various studies (Jersild and Markey, 1935; Eron et al., 1963).

Verbal aggression should be examined here. Few differences have been found in the amount of verbal aggression between the sexes (Sears et al., 1965). However, a slightly more verbal aggression was found on the part of girls (Durrett, 1959). This is in accordance with the fact that girls are more proficient than boys in their language skills and that physical aggression is less acceptable among girls (Kagan, 1964). Verbal aggression and thereby verbal leadership approaches may be exhibited more by the girls than by the boys. Verbal aggression may occur more frequently than physical aggression because teachers and adults may find it more difficult to ignore fighting than verbal threats among children (Brown and Elliott, 1965).

In terms of social class difference, lower class children adopt sex-typed behavior earlier and with greater consistency than middle class children (Kohn, 1959). If verbal aggression is more common among girls, lower class boys will probably exhibit less aggression than middle class boys. Middle class girls may use more verbal aggression than lower class girls due to their higher language proficiency. Thus the difference in leadership behavior that

might be exhibited by the different social classes could be due to both verbal skills and the degrees of conformity to sex role stereotypes.

The suggestive exhibition of more leadership behaviors by the preschool boys than by the preschool girls could be interpreted on the basis of sex-appropriate behavior. In the American culture, boys are encouraged to be aggressive, to exhibit ascendant behaviors, to be independent, to be physically strong, and to be competitive (Hartley, 1959; Hurlock, 1973). The boys at an earlier age learn to act according to the socially prescribed sex-role behavior (Hartley, 1959). Similarly the girls also learn to act sex-appropriately by being less aggressive and more dependent, sensitive and supportive to others (Kagan, 1963). Further research is needed.

Although girls are more proficient than boys in the use of language, they are less successful in their leadership approaches. It could be related to the fact mentioned earlier that boys contribute more original ideas because they are less inhibited and that their peers value their ideas more than those of the girls (Torrance, 1971). This sex role stereotyping may seem to be contrary to the contemporary belief that male and female sex roles are less stereotyped. Elman, et al. (1970) investigated male and female real and ideal self-images. They found that the ideal self-images that subjects described were close to each

other, irrespective of sex differences. Yet the individual subject's self-conception was closer to the stereotyped male and female roles. This might be the reason why girls in this study exhibited a significant correlation between Successful and Unsuccessful Leadership. Hence, the children might be conforming close to the stereotyped sex role behaviors. The leadership approaches made by girls were less acceptable, as they deviate from the cultural stereotype. They might have learned from their parents, who although ideally wish to have less sex differences in their behaviors, their outward behaviors are still conforming to the stereotyped sex roles.

Data presented in Table 6 shows the analysis of variance of the Followership scores. There is a significant social class difference in scale interaction ($F = 10.72$, $p < .01$). Looking at the means as presented in Table 1, there is great variation in the patterns of mean scores of the social classes in Submissive and Unsubmissive Followership behaviors. The means for Submissive Followership (Table 1) behaviors are 5.69 for the middle and 3.06 for lower social class children respectively. In contrast, the mean scores are 1.38 and 2.15 for Unsubmissive Followership.

Thus, middle class children exhibit more submissive than unsubmissive followership behaviors, while the reverse is true for the lower class. It may be assumed that middle class children tend more to follow the leader than to rebel

TABLE 6

ANALYSIS OF VARIANCE OF THE FOLLOWERSHIP SCORES

Source	SS	df	MS	F	p
Social Class	0.37	1	0.37	0.37	
Sex	0.37	1	0.37	0.37	
Social Cl. x Sex	0.08	1	0.08	0.08	
Error I	44.03	44	1.00		
Scales	0.00	1	0.00	0.00	
Social Cl. x Scales	9.18	1	9.18	10.72	<.01
Sex x Scales	0.14	1	0.14	0.17	
Soc. Cl. x Sex x Scales	2.22	1	2.22	2.59	
Error II	37.68	44	0.86		

against him. It might also be suggested that lower class children are relatively more unsubmissive to leadership approaches than middle class children. It may be assumed that when children from middle class families are in the presence of successful leaders they tend to be followers, whereas the children from lower class families are less ready to accept leadership approaches in the presence of leaders. This social class difference can also be the reflection of the different kinds of behaviors that are valued by the different social classes. The middle class subculture encourages independence and aggression and at the same time accepts and condones cooperation (Baldwin, 1949).

The lower class subculture, however, in encouraging independence and aggression probably also values self-preservation and nonconformity. Furthermore, middle class children may follow the chosen leaders submissively because middle class families emphasize obedience, cooperation, and respect for authority (Bronfenbrenner, 1958).

It can also be said that submissive followers and unsubmissive followers are not the same type of children. The unsubmissive followers are the ones who are self-content, self-sufficient, and are independent without having the need to be accepted by and to enter into play groups that are organized and directed by the leaders.

The higher incidence of Submissive Followership shown by the middle class children could also be interpreted as a difference in the children's cooperative behaviors. In the studies of child-rearing practices it is generally conceded that middle-class families tend to be more democratic in their child-rearing practices as compared to the more authoritarian child-rearing practices of the lower-class families (Baldwin, 1949; Hurlock, 1973).

It is also generally believed that children who are brought up under the democratic child-rearing methods, usually enjoy being cooperative. Children who are brought up by more authoritarian child-rearing methods, where force is used to assure cooperation, however, develop negative attitudes and tend to be uncooperative when parental

authority is absent and this behavior is carried into the out-of-the-home activities (Baldwin, 1949). This reasoning could account for the higher amount of Submissive Followership behaviors exhibited by the middle-class children as a result of their being willing to be more cooperative as compared to the lesser amount of Submissive Followership behaviors exhibited by children considered to be in the lower social class in their unwillingness to cooperate outside the home (Baldwin, 1949). If this is so, the difference in being submissive followers may be a result of the difference in child-rearing methods practiced by the parents of different social classes. Further investigation is needed.

An analysis of variance was also done on the Creative Elaboration scores and is shown in Table 7. It can be observed that no significant differences were found.

TABLE 7

ANALYSIS OF VARIANCE OF THE CREATIVE
ELABORATION SCORES

Source	SS	df	MS	F	p
Social Class	0.51	1	0.51	0.51	
Sex	1.06	1	1.06	1.06	
Social Cl. x Sex	1.45	1	1.45	1.45	
Error	44.01	44	1.00		

Correlational Patterning

To ascertain the relationship between the various creativity and leadership variables, correlations were computed between all variables. This was done separately for all subgroups in the study, i.e. for the middle and lower social classes, for boys and for girls, and for the total group. It was felt that the small $\underline{N}$'s in the individual subgroups (sex by social class) (1) would not yield very stable correlations, and (2) would greatly increase the chance of accepting chance results as meaningful because of the great number of correlations computed. Therefore, the matrices for these groups were not interpreted, but are presented in the appendix (Correlational Matrices 1-9) for inspection by those who wish to do so. In this study only correlations within sexes, within social class groups and for the total groups are presented. This represents a total of 330 correlations. Accepting the five per cent probability level, 16 significant correlations would be expected by chance alone. In the present study, 64 significant results were obtained. Due to the possibility of accepting a chance result as meaningful, the discussions that follow will concentrate on consistent and apparently meaningful patterns of correlational results. If an individual correlation is mentioned which does not fit into any consistent pattern of results, this must be taken as a highly tentative result which will be in need of replication.

Creativity Correlational Patterning

First to be discussed will be the correlations between the variables in the creative tests. The variables that are supposed to measure the same thing did not correlate significantly. For example, Fluency 1 does not correlate with Fluency 2. It can be concluded that in five-year-olds, these tests, as shown by their results, may partially measure the concepts, but also measure other aspects of creativity which are not related to older age groups.

It is interesting, however, to note that test scores for different creative abilities which were elicited by responding to similar stimuli are correlated. For instance, Fluency 1, Flexibility 1, and Originality 1 were all scored on the responses a child made when asked: "Most people throw their empty cardboard boxes away, but they have thousands of interesting and unusual uses. Can you think of and tell me many interesting and unusual uses of the boxes?" These creativity scores (from Fluency 1, Flexibility 1, and Originality 1) although supposedly measuring different creative traits are highly correlated (Table 8). The associations involving Originality are somewhat smaller for the boys, and also in one instance for the lower social class. It can be concluded, however, that a generally high level of association pervades all measures from Fluency 1, Flexibility 1, and Originality 1.

TABLE 8

CORRELATIONS BETWEEN FLUENCY TEST 1, FLEXIBILITY
TEST 1, AND ORIGINALITY TEST 1

Subject Category	Flu.1/Flex.1	Flu.1/Ori.1	Flex.1/Ori.1
Total Girls	.86**	.81**	.71**
Total Boys	.66**	.48*	.47*
Total Middle Class	.83**	.71**	.66**
Total Lower Class	.82**	.74**	.43*
Total Group	.81**	.72**	.74**

*p < .05
**p < .01

It can be noted in Table 9 that Fluency 2 and
Flexibility 2, which are also dependent upon a similar stimu-
lus correlated highly. Originality scores were lower in
correlations, not being significantly related to Fluency 2,
but showing some association to Flexibility 2.

It is possible that due to these children's limited
experience and the fact they are still at Piaget's early
Concrete Operational (preoperational) stage of development,
their thinking is limited to concrete objects (Phillips,
1969). If so, the amount and the variety of responses a
child can give depend greatly on his basic knowledge, his
frame of reference, his experience, and his language ability.
A child at this stage of development is still quite concrete
in thought, tends to center his attention on one detail of

TABLE 9

CORRELATIONS BETWEEN FLUENCE 2, FLEXIBILITY 2,
ORIGINALITY 2

Subject Category	Flu.1/Flex.1	Flu.1/Ori.1	Flex.1/Ori.1
Total Girls	.73**	.40*	.43*
Total Boys	.94**	.34	.48*
Total Middle Class	.70**	.22	.47*
Total Lower Class	.94**	.37	.43*
Total Group	.89**	.37	.46*

*$p < .05$
**$p < .01$

an event at a time and is unable to shift his attention to other aspects of a situation. For children in this study with the exception of Originality 2, the abilities being measured can be closely associated with age since only one dimension in a given test occurred. It may well be that in older children more separate abilities would be found to be measured.

Hence, the preschool child, when attempting the tasks in the creativity test looks at a stimulus, tends to be bound to the concrete detail of the stimulus, and is unable to give more original answers. The high correlations between the different scales can be explained by suggesting that the scales are measuring the responses to the same stimuli in a child at a concrete stage of verbal operations.

Leadership Correlational Patterning

In Table 10 the correlations between Successful Leadership, Unsuccessful Leadership, Submissive Followership, and Unsubmissive Followership scores are presented. No significant correlation or relationship between these four variables was found among the total group or among the boys. It can be assumed that among these preschool boys leadership and followership are distinctly different traits. It can be suggested that a leader is not a follower and vice versa. More specifically, Successful Leadership, Unsuccessful Leadership, Submissive Followership and Unsubmissive Followership are distinct traits. It is thus indicated that for these boys there is a clear distinction between these different roles as shown in their social activities and behaviors.

In looking at the correlations in Table 10, one can recognize that there are significant correlations between Successful Leadership and Unsuccessful Leadership among girls (r = .58, p <.01) and in the lower class (r = .42, p <.05). This relationship for girls is not necessarily an indication of conflict of roles but may suggest that leaders are not always successful in their leadership attempts. It is also possible that girl leaders, in their desire to lead, often encounter their peer's rejection or unwillingness to follow. It is also possible that children at this preschool age are already influenced by culture to act in accordance

TABLE 10

CORRELATIONS BETWEEN SUCCESSFUL LEADERSHIP, UNSUCCESSFUL LEADERSHIP, SUBMISSIVE FOLLOWERSHIP, AND UNSUBMISSIVE FOLLOWERSHIP

Subject Category	Suc.Ld./ Uns.Ld.	Suc.Ld./ Sub.Fol.	Suc.Ld./ Uns.Fol.	Uns.Ld./ Sub.Fol.	Uns.Ld./ Uns.Fol.	Sub.Fol./ Uns.Fol.
Total Girls	.58**	.03	.10	.24	.15	.23
Total Boys	-.03	-.19	.07	.32	.13	.25
Total Middle Class	-.06	-.26	.14	.41*	.02	.07
Total Lower Class	.42*	.12	.04	.12	-.05	.04
Total Group	.16	-.09	.05	.25	-.02	-.05

* $p < .05$
** $p < .01$

with their culturally prescribed stereotyped sex-roles.
Girls who are leaders or who are attempting to assume the
leadership role may be deviating from the norm. They may be
rejected by their peers for not exhibiting sex-appropriate
behavior. This could be a reflection of the general belief
that girls who are aggressive may be regarded by their
peers as bossy, and often are disliked for such behavior.

For the children from the lower class families, a
significant correlation (r = .42, p <.05) between Successful
Leadership and Unsuccessful Leadership could be the result
of the lesser language ability of these families. If the
lower class children are limited in their language ability
they may rely more on physical aggression and dominance for
leadership. Their lack or shortage of verbal fluency may
thus be a hindrance to their leadership success, which in
turn may help to account for the significant correlation
between Successful Leadership and Unsuccessful Leadership.
Thus, their leadership attempts often may fail to get other
children to follow them and they do not possess skills
needed for leadership.

Among middle social class children a positive correla-
tion (r = .41, p <.05) between Unsuccessful Leadership and
Submissive Followership (Table 10) resulted. It is possible
that unsuccessful leaders for various reasons are at times
submissive followers. In striving for leadership without
success the unsuccessful leaders may be envious of the

leaders who achieved success. Since they are interested in attempting leadership, they are more aware of the leadership role and are more sympathetic with the leaders than the other children. Their knowledge and understanding of the leadership role make them more capable of identifying the successful leaders. When a successful leader is identified, the unsuccessful leader often is willing to play the submissive follower role by supporting the successful leader. This could be due to the fact that middle class children have learned to cooperate, obey, and respect authority (Bronfenbrenner, 1958). It is also possible that the unsuccessful leader may cater to the needs of the identified leader, because he understands the role of a good follower. It is possible that in becoming a submissive follower the unsuccessful leader can be appointed by the leader to be an associated leader. He may acquire this status through playing the role by carrying out the leader's desires, or by directing other followers to do what the leader wishes to accomplish. In this way, the unsuccessful leader can enjoy the privilege of being in the indirect or deputy leadership category.

For children in the middle class society, Successful Leadership (Table 11) correlates significantly with Creative Fluency 1 (r = .78, p .05) and Fluency 2 (r = .49, p .05). Thus, for the middle class children, the ability to produce

TABLE 11

CORRELATIONS BETWEEN SUCCESSFUL LEADERSHIP AND CREATIVITY

Subject Category	Flu.1	Flu.2	Flex.1	Flex.2	Ori.1	Ori.2	Ori.3
Total Girls	.30	.34	.15	.17	.24	.03	.02
Total Boys	.11	.11	.25	.17	-.15	-.01	-.37
Total Middle Class	.48*	.49*	.34	.18	.36	-.03	-.35
Total Lower Class	-.02	.09	.12	.18	-.08	-.03	-.06
Total Group	.20	.20	.21	.19	.07	.02	-.13

* $p < .05$
** $p < .01$

a quantity of ideas in either task is directly related to
Successful Leadership approaches.

The middle class children are more proficient in
their language usage. Thus, leadership among this group of
children may depend greatly upon verbal fluency. The
leaders must, therefore, possess the ability to produce a
quantity and a variety of ideas in the process of manipulat-
ing other children to follow them. Hence, successful leader-
ship among middle class children is related to both creative
Fluency 1 and 2, but not to Flexibility and Originality.
These findings further support the belief, previously
stated, that verbal fluency, as a specific ability, may be a
decisive factor in leadership success among middle class
preschool children.

Among girls, as shown in Table 12, Unsuccessful
Leadership is correlated with Originality 1 (r = .41, $p <$ .05)
and Originality 3 (r = 42, $p <$ .05). Culturally, girls are
expected to be submissive, and the girls who want to carry
out their original ideas are not playing the traditionally
submissive role. Since they are aggressive, they turn some
children away, and they are regarded as violating the cul-
turally prescribed sex-role. As to the other children,
expecially to the boys, the girl leaders are deemed a chal-
lenge to boy's masculine role, and are thus opposed by boys.
It is possible that girl leaders are often not accepted as
leaders by either sex. Although children's social peer

TABLE 12

CORRELATIONS BETWEEN UNSUCCESSFUL LEADERSHIP AND CREATIVITY

Subject Category	Flu.1	Flu.2	Flex.1	Flex.2	Ori.1	Ori.2	Ori.3
Total Girls	.31	.17	.28	.21	.41*	.10	.42*
Total Boys	-.32	.07	-.31	-.01	-.23	-.18	-.06
Total Middle Class	.04	.04	.04	-.16	.03	-.14	.02
Total Lower Class	.06	.22	.01	.29	.06	-.04	.36
Total Group	.06	.15	.02	.09	.10	-.07	.16

* $p < .05$
** $p < .01$

group may tolerate a girls' deviation from the approved sex-role pattern, it does not mean that they will approve and accept her behavior (Gray, 1957).

In Table 13, the data shows that Submissive Followership correlates with Fluency 1 (r = .51, p < .05), Flexibility 1 (r = .50, p < .05), and Originality 1 (r = .50, p < .05) among the girls. As mentioned previously, leadership among girls is less dependent upon creative abilities. Girls may be culturally conditioned to be submissive and to pursue passive creative endeavours. That is to say, passive creativity in girls is encouraged. Girls are encouraged to be socially compliant, tolerant, cooperative, and calm (Kagan, 1964).

Creative Fluency 1, Flexibility 1, and Originality 1 are measured in terms of responses dependent upon visual imagination which can be related to fantasy. It is often considered more permissible for girls to fantasize than boys. The submissive girl followers may be more introverted in character and may retreat more readily into the fantasy world; thus, their creativity scores are related to their submissive behaviors (Singer & Schonbar, 1961).

Submissive Followership among lower class boys correlates significantly with Fluency 1 (r = .46, p < .05) as shown in Table 13. This, being a single correlation, does not correlate with Flexibility and Originality as found in girls. It is then possible to interpret this as a chance

TABLE 13

CORRELATIONS BETWEEN SUBMISSIVE FOLLOWERSHIP AND CREATIVITY

Subject Category	Flu.1	Flu.2	Flex.1	Flex.2	Ori.1	Ori.2	Ori.3
Total Girls	.51*	.36	.50*	.28	.50*	.14	-.03
Total Boys	-.06	-.05	-.33	-.18	-.14	-.15	.31
Total Middle Class	.01	.05	.14	.05	.03	-.09	.22
Total Lower Class	.46*	.01	.29	-.10	.28	-.22	.05
Total Group	.32*	.11	.19	.02	.23	-.00	.12

* $p < .05$
** $p < .01$

and/or tentative result. The significant correlation
($\underline{r}$ = .32, $\underline{p}$ < .05) between the total group of children and
Fluency 1 can be dismissed as a chance result. Yet possibly
across social class and sex, some aspect of creativity is
found more among the less aggressive preschoolers.

The unsubmissive follower is neither a leader nor a
follower. He is less dependent upon his peer group and is
less affected by the peer group's feelings or judgements
toward him. The unsubmissive follower is independent, self-
sufficient, and may even also be a "loner." He does not
conform to social expectations nor social pressures
(Bandura & Walters, 1963). No significant correlations are
found between Unsubmissive Followership and the creativity
scores among any of the groups (Table 14).

Creative Elaboration scores do not correlate signifi-
cantly with any of the other variables. This is of no great
surprise, since Elaboration is measured through the sub-
ject's ability to elaborate or to extend the details of the
creative drawing he has rendered. This is of a different
distinct aspect of creativity. The difference lies in that
it is nonverbal and artistic as opposed to the other crea-
tive tests which are partially dependent upon verbal fluency.

According to the correlations, creative Fluency 1,
Flexibility 1, and Originality 1 seem to be measuring some-
thing in common. They were combined in Table 15 and

TABLE 14

CORRELATIONS BETWEEN UNSUBMISSIVE FOLLOWERSHIP AND CREATIVITY

Subject Category	Flu.1	Flu.2	Flex.1	Flex.2	Ori.1	Ori.2	Ori.3
Total Girls	-.18	-.21	-.03	-.03	-.26	-.13	.11
Total Boys	.02	.13	-.01	.09	.00	.01	.09
Total Middle Class	-.25	-.28	-.18	-.22	-.36	-.14	.14
Total Lower Class	.07	.23	.13	.33	-.03	.30	.02
Total Group	-.14	-.04	-.04	.01	-.18	-.07	.07

* p < .05
** p < .01

subjected to one analysis of variance. No significant difference was found.

TABLE 15

ANALYSIS OF VARIANCE OF THE SUM OF THE CREATIVE
FLUENCY 1, FLEXIBILITY 1, AND
ORIGINALITY 1 SCORES

Source	SS	df	MS	F	p
Social Class	0.97	1	0.97	0.13	
Sex	22.49	1	22.49	3.21	
Social Cl. x Sex	7.25	1	7.25	1.03	
Error	307.63	44	6.99		

Fluency 2 and Flexibility 2 are also apparently measuring something in common. Originality 2 measured something different from the others. Thus, Fluency 2 and Flexibility 2 were also combined and subjected to one analysis of variance (Table 16). No significant results were obtained.

Thus the major attributes, as measured by these two sets of tests, do not differ clearly as a function of sex or social class. The results of the analyses of variance reported earlier in this paper must be attributed to some other aspects which fluency and originality are measuring rather than to the major sources of variation shown by the correlations among the tests. The fact that the Fluency scales and the Originality scales when combined in analyses

of variance differed is a function of some other variables.
The analogy may be made to tests of intellectual abilities.
Any one test of intellectual ability may measure both a
broad intellective factor and a more specific ability. In
this case it is assumed that Fluency 1 and 2 may measure
both abilities which are related to the specific test (cor-
relational patterns), and also to a lesser extent, some other
specific ability which may be verbal fluency; it may vary
(analyses of variance) according to social class. The
Originality scores may measure some aspect of originality of
ideas which vary with sex and is apart from the test
restricted variance.

TABLE 16

ANALYSIS OF VARIANCE OF THE SUM OF THE CREATIVE
FLUENCY 2 AND FLEXIBILITY 2 SCORES

Source	SS	df	MS	F	p
Social Class	10.86	1	10.86	3.07	
Sex	7.65	1	7.65	2.16	
Social Cl. x Sex	4.25	1	4.25	1.21	
Error	155.33	44	3.53		

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate crea-
tive and leadership behaviors of preschool children from
middle and lower class families. The subjects in the study
were 48 kindergarten age children of both sexes in equal
number from the middle and lower socio-economic classes.
Each of the two classes was represented by 12 boys and 12
girls. They were selected from children who were enrolled
in the Greensboro Head Start Program and in Church
sponsored kindergartens.

The Picture Construction Test, the Unusual Uses Test,
and the Product Improvement Test of the Torrance Tests of
Creative Thinking (Torrance, 1966) were used for the
measurement of creative performance. The Nursery School
Leadership Observation Schedule (Fu, 1970) was used in
recording leadership behavior.

Data were collected on the basis of twelve variables.
These variables were characterized under the following cate-
gories: Successful Leadership, Unsuccessful Leadership,
Submissive Followership, Unsubmissive Followership, Fluency 1,
Fluency 2, Flexibility 1, Flexibility 2, Originality 1,
Originality 2, Originality 3, and Elaboration.

The discussion in this chapter is conducted with reference to the questions designed for this study.

1. What is the relationship of sex to creativity? A significant sex difference ($F = 5.32$, $p < .05$) was noted in the children's creative <u>Originality</u> scores. In general, the boys showed more original creative behaviors than did the girls. The finding is similar to Torrance's (1971) finding that boys give more original ideas than girls. This difference might be the result of cultural pressures or imperatives which encourage boys to be independent, to be assertive, to think independently, to be daring, to try new ideas, and to be less inhibited than girls. Boys might feel freer to express unique, unusual, and original ideas; while girls might experience more inhibiting pressures. Thus when being asked to give unusual ideas they hesitate to do so.

Thus, sex difference could also be attributed to the larger amount of manipulating of stimuli objects by the boys during testing situations. Boys are more accepted by their peers to give original and wild ideas, for their ideas are often valued (Torrance, 1971).

However, no other significant sex differences were found in the creative test scores of the 48 children.

2. What is the relationship of socio-economic status to creativity? A significant ($F = 4.00$, $p < .05$) social class difference was found in favor of the middle class

children in the children's creative fluency ability to pro-
duce a quantity of ideas verbally. Thus language is an
important determining factor in their creative fluency
ability. This socio-economic class difference tends to fur-
ther confirm the generally conceded belief that middle class
children are more proficient in their language skills than
lower class children, consequent upon the language environ-
ment at home (Loban, 1965).

A near significant social class difference was also
found in these preschool children's Creative Originality
scores. It must also be noted that the ability of verbally
expressing original and unique ideas is dependent on
language skills.

Consideration must be given to the Torrance's Tests
of Creative Thinking (Torrance, 1966). Since these tests
purported to be constructed for groups ranging from kinder-
garten to college groups, they may not be an effective tool
for measuring creative abilities of kindergarten age chil-
dren. Wallach (1970) found that there is an increase in the
creative performance level with advancement in age. This
could be the cumulative impact of information and experiences
a child is exposed to over time, and to be comparable to
age-related increases that would be expected in other kinds
of cognitive performances. So it might be suggested that
creativity can be dependent on maturity.

Furthermore, children of this age are at the Preoperation period of Piaget's Concrete Operational stage of development (Phillips, 1969). Their thinking is limited to concrete objects. In these creativity tests it might be suggested that these preschool children were concrete in their thinking and tended to center their attention on one detail of an event but found it difficult to shift their attention to other aspects of a situation. They might have tied themselves down to the concrete details of the stimuli and were unable or unwilling to give unusual, unique, and original responses.

3. What is the relationship of sex to leadership? There was no significant sex difference in leadership scores among these preschool children, but the difference was very close to being significant. It could be suggested that the boys exhibited more leadership behaviors than the girls. The suggestive exhibition of more leadership behaviors by the preschool boys than the girls could be interpreted on the basis of sex-appropriate behavior. In our culture, boys are encouraged to be aggressive, ascendent, independent, competitive, and taking lead. They learn at an early age to act according to socially prescribed sex-role behavior (Kagan, 1964). The pressure for boys to conform to the prescribed sex-role behavior is stronger than that which is exerted on girls (Hartley, 1959; Hurlock, 1973). Girls are also urged, however, to behave appropriately according

to their sex. They learn to be less aggressive, more dependent, sensitive, submissive, and supportive to others. This tentative finding needs replication.

According to the analysis of variance of the Followership scores, no significant sex difference was noted. It could be explained that followers of both sexes were accepted by their peer groups without much trouble or disturbance.

4. What is the relationship of socio-economic status to leadership? No significant social class difference was noted in the leadership behavior of these preschool children. A possible explanation for this phenomenon is that leadership is treasured by both social classes, and both groups of children may exhibit about the same extent of leadership behaviors. Yet there might possibly be a difference in the types of leadership behaviors exhibited by the two social classes. The children from middle class homes exhibited a better command of the Engligh language which they use to persuade others to follow, while the children from lower class homes on the contrary may use physical force to compel others to follow. This should be assessed in future research.

There is, however, a significant social class difference in followership behavior (F = 10.70, p < .01). It seemed to indicate that middle class children showed more Submissive Followership behavior than lower class children.

This could possibly be explained on the ground that these two socio-economic classes might value different kinds of behavior. The middle class subculture encourages independence, aggression, leadership, but simultaneously favors and fosters cooperation (Kagan, 1964). However, the lower class subculture often encourages aggression, independence, and leadership, but emphasizes self-preservation and nonconformity.

Furthermore, child-rearing practices furnish additional explanation for this followership difference. Children who are brought up under democratic child-rearing methods generally enjoy being cooperative. Children who are brought up by more authoritarian child-rearing methods, on the other hand, develop negative attitudes and tend to be uncooperative when parental authority is absent. Middle class parents are believed to be more democratic, with more cooperative children as compared to the more authoritarian lower class parents with uncooperative children outside the home (Baldwin, 1949; Hurlock, 1973). If this is so, the more cooperativeness of the middle class children may account for their exhibition of more <u>Submissive Followership</u> behavior.

5. What are the interrelationships between leadership and creativity among preschool children? First to be presented are the correlations between the variables in the creative tests. The variables that are supposed to measure

the same traits do not correlate significantly, whereas the scores for different creative traits, which were elicited by responding to similar stimuli, correlate significantly. For example, creative Fluency 1, Flexibility 1, and Originality 1 were scored from the responses the children gave to the Unusual Uses Test and correlated highly irrespective of sex and social class (see Table 8).

A less significant but similar pattern was found in the correlations between Fluency 2, Flexibility 2, and to a lesser extent, Originality 2 which were based on the scores of the Product Improvement Test (see Table 16).

This correlation could be due to the fact that when a problem is presented, these children, who are in the early Concrete Operational stage of development, tend to center their attention on one detail alone without being able to see the other aspects of a problem (Phillips, 1969). The result of the analyses of variances using the "same" aspects of creativity may be attributed to some other factors which creative Fluency and Flexibility are measuring. This analogy may be applied to tests of intellectual abilities. Any test of intellectual ability may measure both a broad intellective factor and a more specific ability. In this case, we may assume that the various Fluency measures, for instance, may measure both abilities which are related to the specific test, and to a lesser extent, some other specific ability, probably verbal fluency. Similarly,

creative Flexibility and Originality may be measuring both specific creative abilities and a factor related to the specific test stimuli.

Next, the leadership and followership correlations will be examined. There is no significant correlation between Successful Leadership, Unsuccessful Leadership, Submissive Followership, and Unsubmissive Followership among the boys. For the boys leadership and followership are distinctive traits. They clearly recognize the roles which a leader and a follower may play respectively.

However, among the girls, Successful Leadership and Unsuccessful Leadership are related (r = .58, $p < .01$). Girl leaders may be more often unsuccessful in carrying out their leadership initiatives. It is possible that among preschool children sex-appropriate behavior is more conspicuous, demanding, and important, as they are at an early stage of learning and may behave religiously according to socially prescribed sex-roles for the adults, even to the point of stereotyping. It is probable and possible that girl leaders often encounter rejection, and are unable to succeed with their leadership approaches. It is difficult for a girl to aspire for leadership for she would be rejected by her peers for exhibiting sex-inappropriate behavior.

A significant correlation is found between Successful Leadership and Unsuccessful Leadership among the lower class children (r = .42, $p < .05$). Due to their poorer language

skills, lower class children may resort to the use of physical aggression to compel others to follow. The use of physical aggression may result in more Unsuccessful Leadership approaches, and may account for the type of relationship between Successful and Unsuccessful Leadership.

Unsuccessful Leadership is found to correlate significantly (r = .41, p < .05) with Submissive Followership among the middle class children. This may be explained on the ground that the middle class child may have learned socially to accept and follow a chosen leader. The unsuccessful leader, especially as he understands a leader's interest and role, and despite his failure to assume leadership is willing to cooperate and support the chosen one. In supporting the leader as a good follower and cooperative, the leader may delegate him to play certain responsible roles. In this way, he is able to enjoy the leadership status which he could not achieve himself.

Referring to the relationship between Successful Leadership and creativity among the middle class children, it correlates with Fluency 1 (r = 48, p < .01) and 2 (r = 49, p < .05). Thus, the ability to verbally produce a quantity of ideas is a factor in leadership success among the language proficient middle class preschool children.

Among girls, Unsuccessful Leadership correlates with Originality 1 (r = .41, p < .05) and Originality 3 (r = .42, p < .05) significantly. Girls are encouraged to be creative,

but having original and unique ideas is considered deviating
from the socially set stereotyped sex-role which they are
expected to play. As mentioned earlier, children at pre-
school age, who are learning sex-appropriate behavior, are
perhaps more conforming, without deviation. A girl who
attempts leadership with original ideas is not regarded as
behaving in the submissive role she is expected to play.
Therefore, she is turned down by her peers, and is unsuccess-
ful in her attempt for leadership, despite having good ideas
for play or any other group activities.

Among girls, Submissive Followership is related to
Fluency 1 ($r = 50$, $p < .05$), Flexibility 1 ($r = .05$, $p < .05$),
and Originality 1 ($r = .50$, $p < .05$). Since girls in our
society are conditioned to play a submissive role and to
pursue passive creative endeavors, being submissive fol-
lowers with creative ability their behavior is in tune with
what is socially expected of them. Imagination and fantasy
which appear to be related to creativity are often tolerated
and accepted among girls while fantasy often appears to be
related to introvert behavior. Thus, this researcher con-
cluded that girls who indulge themselves in the fantasy
world may be described as creative, introverted, and sub-
missive.

The unsubmissive followers showed no significant cor-
relations. It is probable that unsubmissive followers are
not necessarily dependent upon their peer groups and often

are independent and self-sufficient. They might be described as the so called "loners." Often they seem less affected by the group's feelings and judgements toward them. They are not likely to conform under social pressures and can be called the preschool nonconformists.

Recommendations for Further Research

The findings of this study offer promise for further research in the areas of creativity and leadership behaviors among preschool children. Future investigations are needed for discovering the following developments:

(1) The effects of different child-rearing practices on the development of leaders and followers;

(2) Social and cultural sex-role expectations and the development of leaders and followers;

(3) Social and cultural sex-role expectations and the development of creative potential;

(4) The development of creativity tests that are suitable for measuring preschool children's creative aptitude; and

(5) Leadership and followership behaviors of preschool children in an integrated situation.

BIBLIOGRAPHY

BIBLIOGRAPHY

Allport, F. H. Social psychology. Boston: Houghton
Mifflin, 1924.

Anastasi, A. and De Jesus, C. Language development and non-
verbal I.Q. Journal of Abnormal and Social Psychology,
1953, 48, 357-366.

Anderson, H. H. Creativity and its cultivation. New York:
Harper, 1959.

Arrington, R. E. Time-sampling in studies of social
behavior: A critical review of techniques and results
with research suggestions. Psychology Bulletin, 1943,
40, 81-124.

Ausubel, D. and Ansubel P. Ego development among segregated
negro children. In R. H. Pascow (Ed.), Education in
depressed areas. New York: Teachers College, Columbia
University Press, 1963. Pp. 113.

Ausubel, D. P. Theory and problems of child development.
New York: Grune and Stratton, 1958.

Ausubel, D. P. and Sullivan, E. V. Theory and problems of
child development. Second Edition. New York: Grune
and Stratton, 1970.

Baldwin, A. L. Theories of child development. New York:
Wiley, 1968.

Baldwin, A. L., et al. The appraisal of parent behavior.
Psychological Monograph, 1949, 63, No. 299.

Baldwin, A. L. The effect of home environment on nursery
school behavior. Child Development, 1949, 20, 49-61.

Bandura, A. and Walters, R. H. Social learning and per-
sonality development. New York: Holt Rinehart and
Winston, 1963.

Barron, F. Complexity-simplicity as a personality dimension.
Journal of Abnormal and Social Psychology, 1953, 48,
163-172.

Barron, F. The disposition toward originality. Journal of Abnormal and Social Psychology, 1955, 51, 478-485.

Barron, F. The psychology of imagination. Scientific American, 1958, 199, 151-166.

Beaver, A. P. A preliminary report on a study of a preschool "gang." In D. S. Thomas (Ed.), Some new techniques for studying social behavior. New York: Teachers College, Columbia University Press, 1929, pp. 9-115.

Berne, E. V. C. An investigation of social behavior patterns in young children. University of Iowa Studies in Child Welfare, 1930, 4, No. 3.

Bernstein, B. Social class and linguistic development: A theory of social learning. In A. H. Halsey et al. (Eds), Economy, education, and society. New York: Free Press, 1961, pp. 288-314.

Borgatta, E. P. and Lambert, W. W. (Eds.) Handbook of personality theory and research. New York: Rend McNally, 1968.

Brewton, B. C. Relationship of sex-role identification and conformity to creative thinking. Dessertation Abstract International, 1969, 30, (2-B), 828.

Bronfenbrenner, V. Some familial antecedents of responsibility and leadership in adolescents. In L. Petrullo & B. M. Bass (Eds.) Studies in leadership. New York: Holt, 1960.

Bronfenbrenner, V. The study of identification through interpersonal perception. In R. Tagiuri and L. Petrollo (Eds.) Perception and interpersonal behavior. Stanford, California: Stanford University Press, 1958, pp. 110-130.

Brown, P. and Elliott R. Control of aggression in a nursery class. Journal of Experimental Child Psychology, 1965, 2, (2), 103-107.

Buhler, C. The social behavior of the child. In C. Murchison (Ed.), A handbook of child psychology. Worchester, Mass.: Clark University Press, 1931, pp. 392-431.

Bundel, C. M. Is leadership losing its importance? Infantry Journal, 1930, 36, 334-349.

Burns, M. J. Selected characteristics of children's individual test of creativity. Dissertation Abstract International, 1969, 30, (2-A), 812.

Buros, O. H. (Ed.) The fifth mental measurements yearbook. Highland Park, N. J.: Gryphon, 1959.

Cartledge, C. J. and Krauser, E. L. Training first grade children in creative thinking. Journal of Educational Psychology, 1963, 54, 295-299.

Connell, D. M. and Johnson, J. E. Relationship between sex role identification and self-esteem in early adolescents. Developmental Psychology, 1970, 3, 268.

Covington, M. W. Some experimental evidence on teaching for creative understanding. Reading Teacher, 1969, 20, 390-396.

Cronbach, L. J. Essentials of psychological testing. Third Edition. New York: Harper and Row, 1970.

Crowley, W. H. Three distinctions in the study of leaders. Journal of Abnormal and Social Psychology, 1928, 23, 144-157.

Crutchfield, R. S. Instructing children in creative thinking. Address delivered at the Annual Convention of the American Psychological Association, Los Angeles, Cal., 1964.

Crutchfield, R. J. and Covington, M. V. Experiments in the use of programmed instruction for the facilitation of creative problem solving. Programmed Instruction, 1963, 4, 3-5, 10.

Cunningham, R. Understanding group behavior of boys and girls. New York: Teachers College, Columbia University Press, 1951.

Diamond, S. Sex stereotypes and acceptance of sex-roles. Journal of Psychology, 1955, 39, 385-388.

Drevdahl, J. E. Factors of importance for creativity. Journal of Clinical Psychology, 1956, 12, 21-26.

Duke, B. M. Anxiety, self-concept, reading, achievement, and creative thinking from four socio-economic status levels. Unpublished doctoral dissertation, University of Alabama, 1964.

Durrett, M. E. The relationship of early infant regulation
     and later behavior in play interviews. Child Develop-
     ment, 1959, 30, 211-216.

Elman, J., et al. Sex-roles and self-concepts: Real and
     ideal. Proceeding of the Annual Convention of the
     American Psychology Association, 1970, 1, 455-456.

Eron, L. D. et al. Social class, parental punishment for
     aggression and child aggression. Child Development,
     1963, 34, pp. 849-867.

Fu, V. R. The development of a nursery school leadership
     observation schedule and a nursery school leadership
     rating scale. Unpublished masters thesis, University
     of N. C. at Greensboro, 1970.

Gellert, E. Stability and fluctuation in the power rela-
     tionships of young children. Journal of Abnormal and
     Social Psychology, 1961, 62, 8-15.

Getzel, J. W. and Jackson, P. W. Creativity and intelligence:
     Explanations with gifted children. New York: Wiley, 1962.

Gibb, C. A. Leadership. In G. Linkzey (Ed.), Handbook of
     social psychology. Reading, Mass.: Addison-Wesley, 1954.

Gibb, C. A. The principles and traits of leadership. Journal
     of Abnormal and Social Psychology, 1947, 42, 267-284.

Goldman, R. J. The Minnesota test of creative thinking.
     Education Research, 1964, 7, 3-4.

Goodenough, F. H. and Tyler, L. E. Developmental psychology.
     New York: Appleton-Century-Crofts, 1959.

Gray, S. W. Masculinity and femininity in relation to
     anxiety and social acceptance. Child Development, 1957,
     28, 203-214.

Griffin, D. P. Movement responses and creativity. Journal
     of Counseling Psychology, 1958, 22, 134-136.

Guilford, J. P. Creativity. American Psychologist, 1950,
     5, 444-454.

Guilford, J. P. Creativity: Its measurement and development.
     In S. J. Parnes and H. F. Harding (Eds.),
     A source book of creative thinking. New York:
     Scribner, 1962.

Guilford, J. P. Three faces of intellect. American
     Psychologist, 1959, 14, 460-479.

Haeffele, J. W. _Creativity and innovation_. London: Reinhold, 1962.

Hartley, R. E. Sex-role pressures and the socialization of the male child. _Psychology Report_, 1959, _5_, 457-68.

Hartup, W. W. Social behavior in children. _Review of Educational Research_, 1965, _35_, 122-129.

Hartup, W. W. and Zook, E. A. Sex role preferences in three- and four-year-old children. _Journal of Consulting Psychology_, 1960, _24_, 420-426.

Haiman, F. S. _Group leadership and democratic action_. Boston: Houghton Mifflin, 1951.

Hemphill, J. K. _Situational factor in leadership_. Columbus, Ohio: Ohio State University Press, 1949.

Hetrick, S. H. et al. Figural creativity, intelligence, and personality in children. _Multivariate Research_, 1968, _3_, 173-188.

Hollander, E. P. and Julian, J. W. Contemporary trends in the analysis of leadership processes. _Psychological Bulletin_, 1966, _71_, 387-397.

Hollingworth, L. S. _Gifted children_. New York: McMillan, 1926.

Homans, G. C. _The human group_. New York: Harcourt, Brace, 1950.

Hurlock, E. B. _Child development_. New York: McGraw-Hill, 1973.

Jersild, A. T. & Markey, F. V. Conflicts between preschool children. _Child Development Monograph_, 1935, No. 21.

Kagan, J. Acquisition and significance of sex-typing and sex-role identification. In M. L. Hoffman and L. W. Hoffman (Eds.), _Review of child development research_. Volume _1_. New York: Russell Sage Foundation, 1964, pp. 137-168. (a)

Kagan, J. The child's sex-role classification of school objects. _Child Development_, 1964, _35_, 1051.

Kahl, J. A. _The American class structure_. New York: Rinehart, 1957.

Kohlberg, L.   A cognitive-developmental analysis of chil-
    dren's sex-role concepts and attitudes.   In E. E.
    Maccoby (Ed.), The development of sex differences.
    Stanford, Cal.:   Stanford University Press, 1966,
    pp. 82-173.

Kohn, M. L.   Social class and the exercise of parental
    authority.   American Sociological Review, 1959, 24,
    352-366.

Kohn, M. L.   Social class and parent-child relationships:
    An interpretation.   American Journal of Sociology,
    1963, 68, 471-480.

Lewis, H.   Deprived children.   London: Oxford University
    Press, 1954.

Lindquist, E. F.   Design and analysis of experiments in
    psychology and education.   Boston: Houghton Mifflin,
    1953.

Loban, W. D.   Language proficiency and school learning.   In
    J. D. Krumbott (Ed.), Learning and the educational pro-
    cess.   Chicago: McNally, 1965,   pp. 13-131.

McCandless, B. R.   Children: Behavior and development.
    Second Edition.   New York: Holt, Rinehart, and
    Winston, 1967.

McKinnon, D. W.   The highly effective individual.   Teachers
    College Record, 1960, 61, 367-378.

McKinnon, D. W.   The nature and nurture of creative talent.
    American Psychologist, 1962, 17, 484-494.

McNamara, B. R.   Creativity in disadvantaged children of a
    particular rural area.   Master's research paper, Wayne
    State University, 1964.

Maslow, A. H.   Creativity in self-actualizing people.   In
    H. H. Anderson (Ed.), Creativity and its cultivation.
    New York: Harper, 1959, pp. 83-95.

Maslow, A. H.   Motivation and personality.   New York:
    Harper, 1954.

Maslow, A. H.   Self-actualizing people: A study of psycho-
    logical health.   In C. E. Moustakas (Ed.), The self.
    New York: Harper, 1956, pp. 160-194.

Maslow, A. H.   Toward a psychology of being.   New Jersey:
    Van, 1962.

May, R. The nature of creativity. In H. H. Anderson (Ed.), Creativity and its cultivation. New York: Harper, 1959.

Merei, F. Group leadership and institutionalization. In E. Maccoby (Ed.), Readings in social psychology. New York: Holt, 1949.

Mischel, W. Sex-typing and socialization. In P. H. Mussen (Ed.), Carmichael's Manual of Child Psychology. Volume 2. Third Edition. New York: Wiley, 1970, pp. 3-72.

Mischel, W. Social-learning view of sex differences in behavior. In E. E. Maccoby (Ed.), The development of sex differences. Stanford Cal.: Stanford University Press, 1966, pp. 56-81.

Moustakas, C. E. The self. New York: Harper, 1956.

Munson, E. L. The management of men. New York: Holt, 1921.

Mussen, P. H. (Ed.) Handbook of research methods in child development. New York: Wiley, 1960.

Nash, J. B. Leadership. Phi Delta Kappan, 1929, 12, 24-25.

Page, H. A. Studies in fantasy: Day dreaming frequency and Rorschach scoring categories. Journal of Consulting Psychology, 1957, 21, 111-114.

Parten, M. B. Leadership among preschool children. Journal of Abnormal and Social Psychology, 1933, 27, 430-440.

Parten, M. B. Social participation among preschool children. Journal of Abnormal and Social Psychology, 1932, 27, 243-269.

Phillips, J. Development of the intellect. New York: Harper and Row, 1969.

Pigors, P. Leadership and domination among children. Sociologus, 1933, 9, 140-157.

Pigors, P. Leadership or domination. New York: Houghton Mifflin, 1935.

Reid, J. B., et al. Cognitive and other personality characteristics of gifted children. Psychological Reports, 1959, 5, 729-737.

Reissman, F. The culturally deprived child. New York: Harper, 1962.

Rhodes, J. M. Contemplation on creativity. In D. W. Smith (Ed.), Gifted children in tomorrow's world. Tucson: University of Arizona Press, 1958, pp. 22-33.

Rogers, C. R. Toward a theory of creativity. In H. H. Anderson (Ed.), Creativity and its cultivation. New York: Harper, 1959, pp. 69-82.

Rogers, J. M. A comparison of selected art abilities of elementary students from varying socio-economic levels. Unpublished doctoral dissertation, University of Connecticut, 1967.

Ross, G. A. A report of the Torrance tests of creative thinking administered to fifth grades at two socio-economic level. Oakland, California: Public Schools, 1963.

Rothbart, M. K. and Maccoby, E. E. Parents' differential reaction to sons and daughters. Journal of Personality and Social Psychology, 1966, 3, 237-243.

Sampson, G. C. The speech and language development of five-year old children. British Journal of Educational Psychology, 1959, 29, 217-222.

Savoca, A. F. The effects of reward, race, IQ, and socio-economic status on creative products of preschool children. Unpublished dissertation, Louisiana State University, Baton Rouge, La., 1965.

Schactel, E. G. Metamorphosis: On the development of affect, perception, attention, and memory. New York: Basic Books, 1959.

Schmidt, H. E. Research in creativity, 1965-1968. Greensboro, N. C.: Richardson Foundation, September, 1969.

Sears, R. R. Development of gender role. In F. A. Beach (Ed.), Sex and behavior. New York: Wiley, 1965, pp. 133-163.

Sears, R. R. Relation of early socialization experiences to aggression in middle childhood. Journal of Abnormal and Social Psychology, 1961, 63, 466-492.

Sears, R. R., Maccoby, E. and Levin, H. Patterns of child rearing. Evanston, Ill.: Peterson, 1957.

Short, E. Juvenile delinquency: The socio-cultural context. In L. W. Hoffman and M. L. Hoffman (Eds.), Review of Child Development Research. Volume 2. New York: Russell Sage Foundation, 1966, pp. 423-468.

Singer, J. L. and Schonbar, R. A. Correlates of daydreaming: A dimension of self awareness. Journal of Consulting Psychology, 1961, 25, 1-6.

Smart, M. S. and Smart, R. C. Children: Development and relationships. New York: Macmillan, 1972.

Smith, R. M. The relationship of creativity to social class. Pittsburgh: University of Pittsburgh Press, 1965.

Starkweather, E. K. Problems in the measurement of creativity in preschool children. Journal of Educational Measurement, 1964, 1, 109-113.

Stein, M. I. Creativity and culture. Journal of Psychology, 1953, 36, 311-322.

Stewart, G. W. Higher education and creativeness. Journal of Higher Education, 1956, 17, 31-39.

Stogdill, R. M. Personal factor associated with leadership: A survey of literature. Journal of Psychology, 1948, 25, 37-71.

Stogdill, R. M. Leadership: A survey of literature. Greensboro, N. C.: Richardson Foundation, 1968.

Taylor, I. A. Conceptual model of a creative leadership system. Greensboro, N. C.: Richardson Foundation. (Memorandum)

Taylor, I. A. Creativity: A transactional approach. Greensboro, N. C.: Richardson Foundation, 1969. Paper presented at the American Association for the Advancement of Science Meeting in Boston, Mass., 1969.

Taylor, I. A. Creativity research for future creativity. In L. Steinberg, et al. (Eds.), Implications of creativity research. Pasadena, Cal.: California Institute of Technology Press, 1962.

Taylor, I. A. Position conceptualization: Transactional creativity. Greensboro, N. C.: Richardson Foundation, 1971. (a) (Memorandum)

Taylor, I. A. Transactive creativity. Greensboro, N. C.: Richardson Foundation, 1971. (b) (Excerpt from a presentation to a group of scientists.)

Terman, L. H. A preliminary study of the psychology and pedagogy of leadership. Pedagogical Seminary, 1904, 11, 413-451.

Thorndike, R. L. The measurement of creativity. Teachers College Record, 1963, 14, 422-424.

Torrance, E. P. Achieving socialization without sacrificing creativity. Journal of Creative Behavior, 1970, 4, 183-189.

Torrance, E. P. Are the Torrance tests of creative thinking biased against or in favor of "disadvantaged" groups? The Gifted Child Quarterly, 1971, 15, 75-80.

Torrance, E. P. Factors affecting creative thinking in children. Merrill-Palmer Quarterly, 1961, 77, 171-180.

Torrance, E. P. Guiding creative talent. Englewood Cliffs, N. J.: Prentice-Hall, 1962.

Torrance, E. P. Influence of alternate approaches to preparing educational stimulation and question asking skills. Journal of Education Research, 1962, 65, 5.

Torrance, E. P. Nurture of creative talents. In R. L. Mooney and T. A. Razik (Eds.), Explorations in creativity. New York: Harper and Row, 1967, pp. 185-195.

Torrance, E. P. Testing the educational and psychological development of students from other cultures and subcultures. Review of Educational Research, 1968, 38, 71-76.

Torrance, E. P. Tests of creative thinking: Directions manual and scoring guide; figural test. Booklet A. Research Edition. Princeton, N. J.: Personnel, 1966. (a)

Torrance, E. P. Tests of creative thinking: Directions manual and scoring guide; verbal test, Booklet B. Research Edition. Princeton, N. J.: Personnel, 1966. (b)

Torrance, E. P. Torrence tests of creative thinking: Norms-technical manual. Princeton, N. J.: Personnel, 1966. (c)

Torrance, E. P. and Fortson, L. R. Creativity among young children and creative aesthetic approach. Education, 1968, 88, 27-30.

Walker, H. M. and Lev, J. Elementary statistical methods. New York: Holt, 1953.

Wallach, M. A. Creativity. In P. H. Mussen (Ed.), Carmichael's Manual of Child Psychology. Volume 1. Third Edition. New York: Wiley, 1970, pp. 1211-1272.

Wallach, M. A. and Kogan, N. Modes of thinking in young children. New York: Holt, Rinehart & Winston, 1965.

Wallas, G. The art of thought. New York: Harcourt, Brace, 1926.

Ward, W. C. Creativity and environmental cues in nursery school children. Developmental Psychology, 1969, 1, 343-347.

Ward, W. C. Creativity in young children. Child Development, 1968, 39, 737-754.

Westburgh, E. M. A point of view: Studies in leadership. Journal of Abnormal and Social Psychology, 1931, 25, 418-423.

Wilson, R. C., et al. A factor analytic study of creative thinking abilities. Psychometrika, 1954, 19, 297-311.

Whyte, W. F. The street corner society. Chicago: University of Chicago Press, 1943.

Yamamoto, K. Creative thinking abilities and peer conformity in fifth grade children. Cooperative Research Project. No. 2021, U. S. Office of Education, 1965.

Yamamoto, K. Development of ability to ask questions. Journal of Genetic Psychology, 1962, 101, 83-90.

APPENDIX A

CORRELATION MATRICES

Correlation Metrix 1: Lower Class Girls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	.74											
(3) Submissive Followership	-.27	-.17										
(4) Unsubmissive Followership	.10	.00	-.15									
(5) Fluency 1	.44	.51	.11	-.32								
(6) Fluency 2	.63	.61	.22	-.20	.77							
(7) Flexibility 1	.30	.48	.26	-.05	.77	.52						
(8) Flexibility 2	.17	.26	.53	-.11	.48	.62	.44					
(9) Originality 3	.31	-.19	.01	.25	-.13	-.31	-.15	.21				
(10) Originality 1	.27	.26	.01	-.18	.81	.41	.73	.20	-.06			
(11) Originality 2	.13	-.05	-.06	.21	.02	-.12	.02	.40	.61	.28		
(12) Elaboration	.37	.45	.06	.29	.23	.17	.46	-.01	.14	.06	-.22	

Correlation Matrix 2:   Middle Class Girls

(1) Successful
    Leadership

(2) Unsuccessful
    Leadership   .03

(3) Submissive
    Followership   .22   .24

(4) Unsubmissive
    Followership   .12   -.15   -.03

(5) Fluency 1   .21   .19   .03   .08

(6) Fluency 2   .19   -.01   .33   -.03   .20

(7) Flexibility 1   .00   .18   .60   .11   .91   .19

(8) Flexibility 2   .18   .20   .22   .12   .09   .86   .13

(9) Originality 3   .59   .01   .02   -.21   .25   -.11   .21   .03

(10) Originality 1 .41   .40   .52   -.25   .84   .21   .74   .03   .50

(11) Originality 2 .02   -.03   -.21   .10   .02   .49   .10   .60   .01   -.16

(12) Elaboration   .42   .04   -.42   .29   -.13   -.33   -.33   -.38   .11   -.12   -.07

                    (1)   (2)   (3)   (4)   (5)   (6)   (7)   (8)   (9)   (10)   (11)   (12)

Correlation Matrix 3:   Total Girls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	.58											
(3) Submissive Followership	.03	.24										
(4) Unsubmissive Followership	.10	-.15	-.23									
(5) Fluency 1	.30	.32	.51	-.18								
(6) Fluency 2	.34	.17	.36	-.21	.40							
(7) Flexibility 1	.14	.28	.50	-.03	.86	.31						
(8) Flexibility 2	.17	.21	.29	-.03	.26	.73	.27					
(9) Originality 3	.02	.42	-.03	.11	.05	-.20	.06	.13				
(10) Originality 1	.29	.41	.50	-.26	.81	.28	.71	.10	.25			
(11) Originality 2	.04	.10	.13	-.13	.12	.40	.14	.43	.12	.08		
(12) Elaboration	.36	.09	-.36	.39	-.01	-.16	.04	-.18	.16	-.13	-.03	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

Correlation Matrix 4: Lower Class Boys

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	-.27											
(3) Submissive Followership	-.24	.51										
(4) Unsubmissive Followership	.20	.16	.31									
(5) Fluency 1	.59	-.32	-.16	.03								
(6) Fluency 2	.38	-.20	-.29	-.20	.42							
(7) Flexibility 1	.44	-.33	-.09	-.15	.88	.52						
(8) Flexibility 2	.19	-.40	-.36	-.38	.27	.82	.37					
(9) Originality 3	-.40	.03	.35	.08	-.57	-.83	-.49	-.69				
(10) Originality 1	.51	-.30	-.11	-.35	.59	.17	.52	.13	-.32			
(11) Originality 2	-.10	-.25	-.16	-.23	-.17	.38	-.15	.56	-.19	-.24		
(12) Elaboration	-.10	.21	-.37	-.34	.11	-.15	.05	-.06	.03	-.20	-.10	

Correlation Matrix 5: Middle Class Boys

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	.34											
(3) Submissive Followership	-.30	-.01										
(4) Unsubmissive Followership	-.03	.05	.25									
(5) Fluency 1	-.33	-.37	.00	.01								
(6) Fluency 2	-.03	.38	-.18	.43	-.07							
(7) Flexibility 1	.21	-.38	-.54	.18	.52	-.12						
(8) Flexibility 2	.08	.31	-.31	.50	-.01	.96	.03					
(9) Originality 3	-.43	-.24	.22	.16	.38	.31	-.13	.19				
(10) Originality 1	-.42	-.26	-.16	.32	.49	.29	.49	.26	.10			
(11) Originality 2	-.01	-.00	-.31	.66	.23	.41	.44	.54	.17	.27		
(12) Elaboration	.28	.19	-.35	.05	.25	.31	.28	.32	.12	.06	.03	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

Correlation Matrix 6:   Total Boys

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	Successful Leadership												
(2)	Unsuccessful Leadership	-.02											
(3)	Submissive Followership	-.18	.32										
(4)	Unsubmissive Followership	.07	.13	.25									
(5)	Fluency 1	.11	-.32	-.06	.02								
(6)	Fluency 2	.11	.08	-.05	.13	.08							
(7)	Flexibility 1	.25	-.31	-.33	-.01	.66	-.08						
(8)	Flexibility 2	.17	-.02	-.18	.09	.06	.94	.02					
(9)	Originality 3	-.37	-.05	.31	.09	-.09	.12	-.33	.01				
(10)	Originality 1	-.15	-.23	-.14	-.00	.49	.23	.47	.20	-.05			
(11)	Originality 2	-.01	-.18	-.14	.01	-.01	.34	.01	.48	-.01	.02		
(12)	Elaboration	.11	.19	-.34	-.18	.17	.18	.15	.19	.08	-.09	-.04	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	.42											
(3) Submissive Followership	-.12	.11										
(4) Unsubmissive Followership	.04	-.05	.04									
(5) Fluency 1	-.01	.06	.46	.07								
(6) Fluency 2	.09	.22	.01	.23	.09							
(7) Flexibility 1	.11	.01	.29	.13	.82	.03						
(8) Flexibility 2	.18	.29	-.10	.33	.05	.94						
(9) Originality 3	-.06	.35	.05	.02	.20	.27	-.11	-.17				
(10) Originality 1	-.08	.16	.28	-.03	.74	.25	.00	.20	-.08			
(11) Originality 2	-.03	-.04	-.22	.30	.06	.37	.03	.43	.06	.07		
(12) Elaboration	.35	.18	-.25	.17	.06	.23	.21	-.05	.08	-.11	-.13	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

Correlation Matrix 8: Total Middle
Class Boys and Girls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Successful Leadership												
(2) Unsuccessful Leadership	-.06											
(3) Submissive Followership	-.23	.41										
(4) Unsubmissive Followership	.14	.02	.07									
(5) Fluency 1	.48	.03	.01	-.25								
(6) Fluency 2	.49	.03	-.04	-.28	.64							
(7) Flexibility 1	.34	.03	.13	-.17	.83	.53						
(8) Flexibility 2	.17	-.16	.05	-.22	.40	.70	.06					
(9) Originality 3	-.35	.02	.22	.14	-.25	.52	.05	.24				
(10) Originality 1	.35	.03	.02	-.36	.71	.31	.66	.16	.29			
(11) Originality 2	-.03	-.13	-.09	-.14	-.00	.22	.20	.47	.05	.00		
(12) Elaboration	.08	.21	-.26	-.00	.14	.00	-.02	.23	.21	.00	-.04	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

Correlation Matrix 9: Total Group

(1) Successful
    Leadership

(2) Unsuccessful
    Leadership   .16

(3) Submissive
    Followership   -.09   .25

(4) Unsubmissive
    Followership   .05   -.09   -.04

(5) Fluency 1   .20   .06   .31   -.14

(6) Fluency 2   .20   .15   .11   -.03   .24

(7) Flexibility 1   .21   .02   .20   -.04   .81   .13

(8) Flexibility 2   .19   .09   .02   .01   .18   .89   .17

(9) Originality 3   -.18   .16   .12   .07   .05   .06   -.04   .09

(10) Originality 1   .06   .10   .23   -.18   .72   .27   .64   .19   .16

(11) Originality 2   .01   -.06   -.00   -.07   .08   .36   .09   .47   .06   .07

(12) Elaboration   .19   .17   -.34   .09   .08   .09   .10   .08   .13   -.05   -.14

                      (1)   (2)   (3)   (4)   (5)   (6)   (7)   (8)   (9)   (10)   (11)   (12)

APPENDIX B

NURSERY SCHOOL LEADERSHIP OBSERVATION SCHEDULE

NURSERY SCHOOL LEADERSHIP OBSERVATION SCHEDULE (NSLOS)

CHILD'S
NAME:

OBSERVER'S
NAME:

CHILDREN WITH S:

TIME:

DATE:

LEADERSHIP BEHAVIOR	SUC.	UNSUC.
1. verbally initiates group activity with children		
2. nonverbally initiates an act/behavior for imitation		
3. verbally directs act/behavior for imitation		
4. helps to enforce group rules		
5. creates and assigns activities/roles to children		
6. orders/commands other children's activity		
7. gives tactful suggestion/direction to children		
8. makes forceful verbal persuasion to other children		
9. creates new ideas/roles within group play activity		
10. assumes authoritative role in group play		
11. his permission/opinion/approval is asked for		
12. served/waited on by other children		
13. asks other children to join in play		
14. gets cooperation because of play ideas and/or tact		
15. gets cooperation through bribery/bargaining		
16. insists on having own way of doing things		
17. attempts to secure material forcefully		
18. dictates which children can enter play group		
Total		

FOLLOWERSHIP BEHAVIOR	SUB.	UNSUB.
1. yields to other children's initiative		
2. imitates children without verbal direction		
3. imitates direction of other children .		
4. adheres to group rules enforced by children		
5. assumes roles assigned by other children		
6. submits to children's orders/commands		
7. adheres to tactful suggestions/directions of children		
8. submits only after children's forceful persuasions		
9. changes role within group to play newly created role		
10. assumes passive role within group		
11. seeks approval/opinion/permission of other children		
12. serves and waits on other children		
13. when asked rejects own play to join other's organized play		
14. submits to play ideas of other children		
15. yields to other children's bargains/bribery		
16. lets other children have their own way		
17. relinquishes material if forced		
18. enters group but is rebuffed/rejected		
TOTAL		

OTHER BEHAVIORS

1. engages in solitary activity	
2. engages in parallel play near single/group activity	
3. socializes with other children	
4. socializes with adults	
5. seeks adult attention/help	
6. adult intervention	