

AN ABSTRACT OF THE THESIS OF

LOU ANNE WALN MOON for the MASTER OF SCIENCE  
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Mrs. Marian Carlin

This study is a comparison of the extent of acceptance by peers in first-born children and last-born children.

The following hypothesis was tested: There is no difference in peer acceptance of the first-born child as compared to the last-born child.

The subjects were students between the ages of 11 years 10 months and 14 years 5 months in attendance at North Albany Junior High School, Albany, Oregon, during the school year 1967-1968. The total number of subjects tested was 500. The final group of first- and last-born children totaled 184 subjects.

In order to test the hypothesis, an adaptation of the Peer Nomination Inventory developed by Wiggins and Winder (1961) was used to measure the number of nominations a child received from his peers. The test consists of 59 statements which describe behaviors that may be observed in peers in a row down the left hand

side of the page. On the right-hand side of the page is a column in which to write the name of the person who best fits the statement.

The subject's raw score of acceptance was the number of total nominations that he received.

The raw scores were ranked and analyzed by the Wilcoxon-Mann-Whitney Test which measures the degree of association existing between the means of two independent samples.

Significance at the .05 level was found to exist only when comparing the total nominations of first-born and last-born children. No significance was found when comparing first-born males and females; last-born males and females; first-born and last-born males; and, first-born and last-born females.

Subjects with an extremely high number of nominations were then taken out and the data was re-analyzed using the Wilcoxon-Mann-Whitney Test. Significance ( $p = .05$ ) existed in all groups except for the first-born males vs. first-born females.

Several factors were reviewed that may have accounted for a lack of significance in most groups compared:

- 1) The appearance of several male subjects who received an extremely high number of nominations.

- 2) Another possible explanation might be the slight changes in wording made in the PNI which were made to adapt it to the age level of the subjects tested.

- 3) The large sample used in this study may not be as effective

as it is with a smaller sample due to the necessity of recalling the names of a large number of peers for the PNI.

Several research directions seem justified on the basis of this study:

- 1) repetition of this study with a smaller sample.
- 2) testing hypotheses concerning different ordinal positions as related to peer acceptance.
- 3) repetition of this study using a different instrument.

A Comparison of Peer Acceptance of First-Born  
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by

LouAnne Waln Moon

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APPROVED:

*Redacted for Privacy*

\_\_\_\_\_  
Associate Professor of Family Life  
in charge of major \_\_\_\_\_

*Redacted for Privacy*

\_\_\_\_\_  
Chairman of Department of Family Life \_\_\_\_\_

*Redacted for Privacy*

\_\_\_\_\_  
Dean of Graduate School \_\_\_\_\_

Date thesis is presented \_\_\_\_\_

*May 19, 1969*

Typed by Gwendolyn Hansen for \_\_\_\_\_

LouAnne Waln Moon

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# A COMPARISON OF PEER ACCEPTANCE OF FIRST-BORN AND LAST-BORN CHILDREN

## I. INTRODUCTION AND REVIEW OF LITERATURE

### Statement of the Problem

Many research workers have examined the social and emotional influences upon children in the several ordinal positions. Little, however, has been done in the area of the relationship between ordinal position and peer acceptance. It has been found that differences between the first-born and last-born child may occur in many areas of personality (Alexander, 1966; Ansbacher, 1956), and that the behavior of these children is somewhat dissimilar from that of a child in another ordinal position.

If birth order plays a role in influencing personality, then we must ask two broad questions: 1. Does the child's ordinal position make a difference in his acceptance by his peers? and, 2. If so, what are these differences?

The differences that appear to be present between children in the several ordinal positions should be examined for their importance. There are some recognizable differences between the first-born child and subsequently born children (Alexander, 1966), and it seems important to look at these differences and to define them specifically.

### Purpose of the Study

It is the purpose of this paper to compare the first-born child and the last-born child in relation to the extent to which each of these is accepted by his peers.

### Review of the Literature

It is often implied that children of the same family are all similar in personality. This is incorrect, due to the differences in environment each child experiences (Ansbacher, 1956). Each child is born into a different situation because of the way in which he is treated and the number of siblings he has or will have. The persons around him react differently to him than they do to his other siblings, and he interprets their actions in a different way than his siblings might. Thus, it is not only the way others react to him, but also how he in turn reacts to them (Ansbacher, 1956). Thomas, et al. (1963) state that each child has an individual primary reaction pattern which implies that all children will not respond in the same fashion to a given environmental influence.

Past research has indicated a relationship between birth order and the personality of a child. Findings show that there are differentials interrelated with birth order, such as the size of the family, role relationships within the family, and the structure of authority or

discipline under which the child grows up (Sampson, 1965). Other aspects, such as differences in age and sex of siblings may also contribute to the differential effects of birth order (Altus, 1966).

The size of the family has an undetermined influence upon the personality of the child because of the individual attention he may or may not have. In a large family, the children may be treated differently from those in a smaller family due to the many more responsibilities of the parents and family members of the large family. A child with more siblings seems to be more deprived of adult attention than an only child, and the greater the number of younger siblings a child has, the more deprived he appears to be (Schwartzman, 1962). A specialization of role among siblings in a large family results from birth order. Each child develops his own role on the basis of, and in relation to, the roles which have already been established. No sibling wishes to be the exact counterpart of another, so the choices and possibilities are limited with each succeeding birth (Bossard, 1956).

The roles played by the family members may have an influence upon the personalities of the children. The response of others to the child and of the child to others has an effect upon his personality.


The structure of authority or discipline in the family contributes to differences between children in different positions of birth order since each child is subjected to slightly different methods of

discipline, depending upon at least three factors. These may be

1. the child's age, since a younger child is disciplined in different ways and for different reasons than an older child,
2. the type of behavior exhibited by the child, and,
3. the changes in attitudes of the parents and the changes in parental practices of child rearing as affected by the child's birth order (Bossard, 1956).

Behavior of the child may partially reflect the place into which he was born in the family, and the many influences upon him. Another factor might also be the child's primary reaction pattern which not only influences his behavior, but also his parent's attitude toward him (Thomas, et al., 1963).

The sex of siblings in conjunction with the child's birth order position may influence him in that the differences or similarities of sex will have an effect upon how the environment and the child interact. Also, the age differences of the siblings will be a factor in the differentiation of children's reactions to each other.

Research indicates that birth order does not necessarily determine the behavior of each child, but it provides a different environment for each child. This, in turn, may have an influence upon the type of person the child will become (Wile and Jones, 1937). The influences provided by the child's environment partially account for the differences in the characteristics of the child which are often attributed to birth order. 

In summary, then, birth order does not necessarily determine the personality characteristics of each child, but it provides a different environment for each child which, in turn, molds that child into the type of person he will become. The influences discussed above are factors contributing to the different characteristics of a child which are somewhat dependent upon birth order. The concern in this paper is for first-born and last-born children. In considering these positions, it is necessary that the factors involved in each be carefully analyzed.

The first-born child differs from the last-born in many respects. Abernathy (1940) concluded that the first-born child is more aggressive and better adjusted than his last-born sibling, but Bossard (1956) stated that first-born children have the highest percentage of poor adjustment of any other sibling position and first-born females seemed to be less well adjusted than first-born males. Alexander (1966) found that the first-born child is more dependent than the last-born child. He hypothesized this to be so due to the overprotectiveness of the child's mother. Overprotectiveness is defined by Hurlock (1964) as an excess of physical contact between the parent and child, a prolongation of infantile care, prevention of the development of self-reliance, and lack or excess of parental control.

There may be many factors which might bring about over-protection such as a long period of anticipation and frustration before

the child's birth, conditions in the child (physical handicaps or illnesses), sexual incompatibility between the parents, social isolation, emotional impoverishment in early childhood, and thwarted ambitions (Hurlock, 1964; Jersild, 1960). Thus, overdependency may be a serious effect of overprotection.

The first-born child begins life all alone with much attention given him by family and friends. Later he is ousted from his position by the appearance of another sibling. This is often referred to as "dethronement" (Ansbacher, 1956). When this occurs, the first-born assumes the part of protector and helper, but is often still vying for the love and attention that has seemed to diminish with the appearance of the new family member. It is speculated that for these reasons, first-born children often assume the leadership role and have a high need for affiliation in groups (Becker and Carroll, 1962).

The first-born child seems more likely to achieve social and intellectual eminence because of parental expectations and early demands for achievement and independence (Sampson, 1965). Lacking siblings during his early years, a first-born child is alone with adults and has much influence upon them. Intellectually, he is taught early and a great deal of time is spent on his instruction with rewards for successful attempts. As more children are born into the family, he is left to be more independent with more responsibilities. In both sexes, Toman (1961) feels that the eldest child with either sex

sibling is very independent of others.

The last-born child is dissimilar to the first-born in a variety of ways. He is seen to be much less aggressive than his first-born counterpart, and seems to be content with less independence. He cannot be dethroned, as the first-born child can, but he has older siblings to set a pace which he may feel he has to sustain (Ansbacher, 1956). First-born and last-born children have very different amounts of expectations placed upon them. (The first-born has only the expectations of his parents, but last-borns have expectations from parents as well as all other siblings (Bossard, 1956). The last-born child shows a great deal of competitiveness and tries very hard to outdo his older siblings. It is surmised that this usually comes about because he feels that the others are older, stronger, and more experienced than he (Ansbacher, 1956).)

The last-born, or youngest, child may be more pampered and spoiled which probably accounts for his greater dependency. In this context, "spoiled" is used to refer to the overindulgence of a child. Stone and Church (1968) define "spoiling" as giving the child mis-directed attention and as a consequence, giving the child an upper hand in parent-child relations. In disagreement with this, however, is the finding that last-born children have less need for affiliation in groups as shown on the Jonheere (1954) test given by Becker and Carroll (1962). It would seem, however, that a dependent child would

need more social contacts. This hypothesis has been upheld in several studies which found that the youngest child is much more social than an older child as measured by the Bernreuter Personality Inventory given twice at two week intervals (Hayes, 1938). Contradiction is shown in other research on birth order, but no direct answers have been found.

Much debate on the adjustment of first and last-born children seems to indicate that last-born children have fewer problems of adjustment than first-borns (Sampson, 1965), but there is disagreement on this point. In a study by Sells and Roff (1963), students rated their same-sexed peers as to best liked and least liked. Those ranked highest, or liked most, were only children and youngest children which would indicate a higher degree of peer acceptance in last-born children as compared to first-born children. Not enough work has been done on this particular subject, however, to merit a definite conclusion.

The last-born child, as Toman (1961) describes him, is dependent and willingly accepts authority. He likes to be waited on and is more of a follower in groups.

In a study by Bossard (1956), 83 subjects were asked if they were satisfied with their birth order position. Of the 13 first-born children polled, only five were satisfied. Last-born children were found to be more satisfied with their birth order position, with 14 out



of 16 showing satisfaction. When first-born subjects were questioned as to why they were not satisfied with their position, they cited as reasons a tiring of responsibility, frequent exploitation, and the fact that they were usually the practice child.

In summary, (first and last-born children do have distinct differences in personality). This paper will compare children in these two ordinal positions in terms of peer acceptance.

Peer acceptance is defined by Hurlock (1964) as an index of the success with which the child has taken his place in a social group and the extent to which his associates like to play or work with him. Social development, or placement in a social group, means an acquisition of the ability to behave in accordance with social expectations (Hurlock, 1964). It is the process by which an individual, born with potentialities of enormously wide range, is led to develop actual behavior which is confined within a much narrower range--the range of what is customary and acceptable for him according to the standards of the group (Child, 1954). No child is born social or anti-social (Hurlock, 1964). The learning experiences the child has during the early years of life will largely determine his attitudes toward people and social experiences. With each year, the child is expected to become better adjusted to social life and conform to social expectations for his age (Hurlock, 1964; Takitani, 1968).

Very early, Charles Cooley (1902) saw the individual and

society as being very important to one another. He stated that the self, or man's "social nature" of feelings and attitudes, is gradually learned in relationships with other persons, for example the family. For Cooley, learning is also evidenced in the individual's adoption of different roles in relationships with different persons.

George Herbert Mead (1934), another sociological theorist, saw the self participating actively in its own development. Adoption of attitudes from a social group was necessary for an individual to communicate and to participate with others.

Zelen (1954) operationally defined peer acceptance as the total score achieved by an individual on the Bonney Sociometric Technique (1946). He found a correlation between peer acceptance and the child's acceptance of others. Thus, in Zelen's opinion, it appears that a liking for others and being liked by others are highly reciprocal characteristics. In a similar study by Manis (1955) findings derived from Cattell's factor analysis of Allport and Odberg's adjective trait list indicated that over a period of time there may be an increase in agreement between the individual's self perception and the perceptions his friends have of him. Sheerer (1949) also established that a substantial correlation exists between acceptance and respect for the self and acceptance and respect for others.

The peer group helps the child develop a concept of himself. The ways in which peers react to a child and the basis upon which he

is accepted or rejected give him a clearer and perhaps more realistic picture of his assets and liabilities (Breslin, 1968). Mussen, Conger and Kagen (1963) state that the nature of children's peer groups vary somewhat with age. During the early years of middle childhood informal groups formed by the children themselves predominate. These may be referred to by the child as "the gang." The gang has few formal rules for governing itself, and there is a rapid turnover in membership. Later, between the ages of 10 and 14 years, the tendency is for peer groups to become more highly structured with more formal organization. This latter group is the type which can be observed in the subjects used for the present study.

Being accepted by one's peers is very important to children. The single term used to describe this social acceptance is "popularity" (Koch, 1933). Popularity has been connected with several acceptable qualities which have been described by Jersild (1960) as active, alert, interested, good looking, cheerful, friendly, above average, non-dependent upon adults, sensitive to the thoughts of others and interested in them. These qualities may not all be found in one child, but one or more will be likely to contribute to the acceptance of a child by his peers. Tuddenham (1951) studied personality variables as related to popularity. This was investigated by analyzing the responses of a large number of first, third and fifth grade boys and girls to a reputation test. In this test, the subject

lists the children in his class who "have many friends," are "good sports," "good-looking," etc. Results of this study showed that popular children in most groups were considered good-looking, friendly, good sports and best friends. The relationship of others attributed to popularity varied with sex and age.

Peer acceptance is so important that children may exhibit behavior which is baffling to adults in order to please their peers or gain their attention (Jersild, 1960). Acceptance by peers is far more important to a child than good relationships with adults, and adult relationships cannot make up for a lack of peer acceptance (Gordon, 1959; Hurlock, 1964).

Acknowledging the importance of popularity, or peer acceptance, it is interesting to look at the differences between first-born and last-born children in this light. There seems to be a difference both in the child's need for social contacts and the degree to which he is accepted by his peers. There is disagreement as to whether children in the first or last ordinal position are the more popular. Alexander (1966) studied the difference in peer acceptance among several ordinal positions, and found the first-born child to be more popular than those born later. This conflicts with other findings that show first-born children to be less popular than the other positions (Alexander, 1966). Witty (1937), in his research on only and intermediate children, found that onliness is of little significance in development and

adjustment of senior high students. This would indicate that first or last-born children may be more accepted by their peers than only children as tested by the Bernreuter Personality Inventory.

Since first-born and last-born children exhibit differences in behavior, it is reasonable to hypothesize that these differences are related to their ordinal position and have an influence upon the acceptance of the child by his peers.

The purpose of this paper is to compare peer acceptance of the first-born child vs. the last-born child using the Peer Nomination Inventory developed by Wiggins and Winder (1961).

The specific hypothesis tested is the following: There is no difference in peer acceptance of the first-born child as compared to the last-born child.

## II. DESIGN

### Subjects

The subjects for this study were from the North Albany Junior High School, Albany, Oregon, and included all of the students in grades 7, 8, and 9. The ages of subjects ranged from 11 years 10 months to 14 years 5 months, inclusive. They were sorted into specific categories: 1. first-born male; 2. last-born male; 3. first-born female; and, 4. last-born female. The entire student body was tested so that students would not be singled out and so that an overall view of the student body could be obtained. From this large sample, those that fit into the categories stated above were sorted and used for data.

The subjects were screened so that they came from a natural, intact family. Both parents had to be living in the home and all siblings had to be biologically related to both parents and to the subject. This ruled out any step, half, or foster siblings. This homogeneous grouping appeared to be better than a heterogeneous group because, as Thomas et al. (1963) have postulated, it is difficult to decide whether individual differences in behavior are initial or due to environment.

Although the students used for this sample can be considered

typical of junior high students, in general, the results may be applied only to this sample.

### Instrument

The instrument used was an adaption of the Peer Nomination Inventory developed by Wiggins and Winder (1961).

The Peer Nomination Inventory consists of statements in a row down the left-hand side of the page. These statements refer to actions or behavior that a child might see in his friends. There is a blank column on the right-hand side of the page where students are to write the full name of the person whom this statement describes (as given in the instructions). Due to the large size of the sample (500), it is impossible to list the name of every student in the school on the sheet. This would, no doubt, be a help to those taking the test because they would remember many more students and have a wider variety of names from which to choose.

The Peer Nomination Inventory (PNI) was adapted to make it more applicable to this particular age range. Items were changed to make the vocabulary more appropriate for these students. An example of this is the changing of "He always plays by himself" to "He always runs around by himself." Another example of the adaptation made is changing of "He cries when he doesn't do something right" to "He gets very mad when he doesn't do something right."

Eleven items were reworded so they would be more applicable to the junior high age student. The following is a list of changes made in addition to those previously cited:

| <u>Original</u>  | <u>Changed to</u>  |
|--|--|
| 1. No one plays with him.                                  | No one runs around with him.                             |
| 2. He does not join in any playing.                        | He does not join in any fun.                             |
| 3. Someone makes fun of him and he starts crying.          | Someone makes fun of him and he gets mad.                |
| 4. He cries if you hurt his feelings.                      | He pouts if you hurt his feelings.                       |
| 5. He cries when he doesn't do something right.            | He gets real mad when he doesn't do something right.     |
| 6. Hardly anybody likes to play with him.                  | Hardly anybody likes to run around with him.             |
| 7. He doesn't want to play.                                | He doesn't want to do anything.                          |
| 8. He cries when he doesn't know how to play.              | He gets mad when he doesn't know how to do something.    |
| 9. On the playground he just stands around.                | In the halls he just stands around.                      |
| 10. He doesn't care to join in and play on the playground. | He doesn't care to join in when we walk around together. |

It is possible that these changes might alter the internal consistency of the instrument, but words such as "cries" and "plays" are not acceptable to this age group and subjects would be less apt to answer accurately if items included such a vocabulary.

The items used in this inventory are those developed and used



by Wiggins and Winder (1961) in their investigation of preadolescent boys. Not all items originally used by Wiggins and Winder are included, but a lack of time necessitated shortening since this could be given only in the class period (50 minutes). The short form used in this study was successfully used by Breslin (1968) in her work with handicapped children. She excluded only three filler items: "He can run fast," "He has plenty of money," and "He's got a real nice bike." These items were not appropriate for her group of subjects. Only those excluded by Breslin were omitted here as it was of concern that the omission of too many items might interfere with the validity and reliability of the inventory. The identical items were excluded in this study because they were not necessarily appropriate for the age group studied.

In developing the PNI, Wiggins and Winder used interviews, and other questioning to construct a large pool of behavior descriptions which might be considered representative of social maladjustment in a peer group of this age. It was believed that the specific behaviors described by these statements were quite recognizable by these children. The behaviors included four types: aggression, dependency, withdrawal, and depression, although the children did not recognize them as such. This made a problem of accurately reflecting peer judgment in terms of behavior that would be meaningful for both the children and test constructors (Breslin, 1968).

In the final form, Wiggins and Winder used a sample of twenty-five eight to 12 year old boys who were asked to describe the behavior of boys in their class who were not making adequate social adjustments. From these statements, judges were asked to sort the 3200 behavior statements into five categories (aggression, dependency, withdrawal, depression, and other). From this, the following working definitions were formulated:

Aggression--The boy, by implication or act, is hurtful or destructive. His behavior may be described as quarrelsome, antagonistic, negativeistic, disruptive, defiant, etc.

Dependency--The boy, by implication or act, attempts to secure attention, approval, or affection from adults or peers by physical proximity, verbal demands or any device that tends to focus attention on him.

Withdrawal--The boy, by implication or act, minimizes interaction with others. Thus, he characteristically does not respond to situations which would stimulate participation in most boys. He tends to be described by others as quiet, non-aggressive, shy (shys away from), non-participating, etc.

Depression--The child, by implication or act, can be considered as being overly moralistic in his self-evaluation and, as a consequence is "unhappy." He tends to be described as sad by others, feeling inadequate, remorseful, excessively self-critical, accepts blame, etc.

The statements finally selected were mostly quotes from the children. Included in these statements were some involving likeability items. This was done so that the subjects would not become tired of repeatedly answering negative statements and to allow for an estimate of the popularity of likeable sociometric judgments. Northway (1952)

states that most sociometric tests delete negative choices because they have been found to cause resentment and comment in the group.

The reliability of the PNI was tested by the internal consistency method. The internal consistency of each scale was estimated by correlating the odd versus the even items for each scale. There was a large degree of internal consistency which suggests that relatively homogenous behavior is accessed by variable scales.

Subjects were retested one year after the initial testing for reliability of the inventory. Not all subjects were available for testing; thus, 48 percent of the original cases were retested. For the total group the test-retest coefficients seemed low, but the authors stated that they were encouraging because of the differences in subjects and the fact that they were in a different grade with different classmates at the time of the second testing (Wiggins and Winder, 1961).

Winder and Wiggins (1964) gave further validation of the PNI in a study comparing results of trained observers with the peer nomination scores. Observers recorded aggression and dependency, respectively, according to detailed checklists which had been pre-tested. In both situations there were two observers present.

Results indicated that the overall difference between means on observed aggression is significant at the .001 level and that the observed PNI dependency mean scores were significant at the .05

level. These results are partial validation of the aggression and dependency scales of this PNI scale.

After investigating several different sociometric tests, the author decided upon the Wiggins and Winder Peer Nomination Inventory (1961). This choice was made because of the time limit of one class period in which to give the test to the subjects. The items were very short, and allowed time for the subjects to think about each one. Also, these items were not complicated and did not require a large amount of time in which to complete them. The PNI is more appropriate for this study than many other instruments because it tests actual popularity; i. e. , how many times the subject is chosen by his peers. This is what was of concern to the present author.

### Procedure

The study was done in the spring of the year to enable the subjects to form close friendships. This gave a clearer picture of peer acceptance than if it had been done early in the school year before the students became well acquainted. The fact that school was nearing its close was considered, but it was decided that this would have little effect upon the administration of this inventory to this age level.

The help and cooperation of teachers who came in contact with all students was asked in giving the inventory. This involved the

social studies classes which all students are enrolled in. These classrooms ranged in size from 25 to 30 students. The inventory was given to all students in the same day to avoid any discussion of questions and reactions to it among students.

The instructions were read orally by the teacher to the entire class as follows: Place the information about yourself at the top of the page in the blanks provided. Write your full name, your age, your year in school, and the names of your brothers and sisters in the blanks specified for this. (pause) Then beside each of your brothers' and sisters' names, tell whether they are your full brothers and sisters or if they are half, step, or foster. (pause) Now, tell whether they are older or younger than you. This is very important, so be sure that you do it for each one. (pause) Now, read each statement given at the left of the page, think about it, and fill in the full name of a person you know whom it best describes. The people named should be from this school and you should not fill in your own name. Each statement says "He" but you are to think "he or she" since you may wish to give a girl's name rather than a boy's.

After these initial instructions the teacher asked for questions. When these were answered, the students were on their own time. They were given approximately 50 minutes in which to do the inventory which was sufficient time for all but a few of the students.

Not everyone finished in the time allotted, but the sample is

large enough that this did not hinder the results. Of the total number of subjects (500) only 25 did not complete the inventory. Of these, six were included in one of the final groupings of first or last born males and females (184 subjects) and this was not considered to be a significant number.

### III. RESULTS

The Peer Nomination inventory (Wiggins and Winder, 1961) was given to the subjects to test the null hypothesis: There is no difference in peer acceptance of the first-born child compared to the last-born child. The results of the study described on the preceding pages are presented in this chapter.

The ranked data of the five behavior characteristics and total scores from the Peer Nomination Inventory were analyzed by the Wilcoxon-Mann-Whitney test. This test measures the degree of association existing between the means of two independent samples.

A difference in means exists if either  $R$  (the sum of the ranks of the smaller sample) or  $R'$  [ $n_1(n+1) - R$ , when  $n_1 =$  smaller sample,  $n_2 =$  larger sample, and  $n = n_1 + n_2$ ] is smaller than or equal to  $R_\alpha(n_1, n_2)$ . If either  $R$  or  $R'$  is larger than  $R_\alpha(n_1, n_2)$  there is no reason to believe that the two means differ.

The results are given in tables which show the mean, standard deviation, and  $R$  scores as analyzed by the Wilcoxon-Mann-Whitney test. The tables are discussed in order to explicate their significance.

Table 1 shows the mean and standard deviation of the total scores of all first-born subjects compared to last-born subjects. Values of  $R$ ,  $R'$ , and  $R_\alpha$  as used for the Wilcoxon-Mann-Whitney

test are also given. R is shown to be significant according to the test used, so that there is a significant difference between acceptance by his peers of the first-born child compared to the last-born child and the null hypothesis is rejected.

Table 1. Mean total nominations of all first-born subjects compared to all last-born subjects.

|                      | First-born<br>n = 94 |       | Last-born<br>n = 90 |       | R     | R'   | R <sub>a</sub> |
|----------------------|----------------------|-------|---------------------|-------|-------|------|----------------|
|                      | Mean                 | S. D. | Mean                | S. D. |       |      |                |
| Total<br>Nominations | 34.1                 | 50.2  | 32.8                | 40.7  | 8038* | 8612 | 8101           |

N = number of subjects

S. D. = standard deviation

\* shows significance at the .05 level

Tables 2, 3, 4, and 5 show the mean of the total nominations received by each group described on the table. The r scores in these tables show no significance which would indicate no difference in acceptance in the groups compared on each table.

The lack of significant difference is no doubt due to the uncontrolled sample. The high number of nominations received by a few of the male subjects seemed to be large enough to influence the mean values. This can be seen from the large standard deviation found in Tables 2, 3, and 4.

In order to test whether the large nominations influenced the



Table 2. Mean total scores and standard deviations for first-born females compared to last-born females.

|            | First-born<br>n = 44 |       | Last-born<br>n = 47 |       | R    | R'   | Ra   |
|------------|----------------------|-------|---------------------|-------|------|------|------|
|            | Mean                 | S. D. | Mean                | S. D. |      |      |      |
| Aggression | 2.4                  | 5.2   | 1.8                 | 2.9   | 1921 | 2127 | 1777 |
| Depression | 3.0                  | 4.0   | 3.4                 | 4.3   | 1997 | 2051 |      |
| Withdrawal | 3.7                  | 10.6  | 2.1                 | 3.0   | 2030 | 2018 |      |
| Dependency | 3.4                  | 5.4   | 2.9                 | 4.7   | 1954 | 2095 |      |
| Likability | 4.9                  | 5.2   | 4.1                 | 3.2   | 2017 | 2031 |      |

N = number of subjects

S. D. = standard deviation

Table 3. Mean total scores and standard deviations for first-born males compared to last-born males.

|            | First-born<br>n = 50 |       | Last-born<br>n = 43 |       | R    | R'   | Ra   |
|------------|----------------------|-------|---------------------|-------|------|------|------|
|            | Mean                 | S. D. | Mean                | S. D. |      |      |      |
| Aggression | 10.0                 | 15.8  | 11.0                | 18.0  | 2044 | 1998 | 1766 |
| Depression | 10.0                 | 16.7  | 12.3                | 16.4  | 2113 | 1929 |      |
| Withdrawal | 8.8                  | 12.8  | 10.5                | 20.2  | 2064 | 1979 |      |
| Dependency | 8.8                  | 11.5  | 9.2                 | 12.2  | 2066 | 1976 |      |
| Likability | 11.1                 | 13.4  | 10.5                | 19.7  | 1875 | 2168 |      |

Table 4. Mean total scores and standard deviations for first-born females compared to first-born males.

|            | Female<br>n = 44 |       | Male<br>n = 50 |       | R    | R'   | R <sub>a</sub> |
|------------|------------------|-------|----------------|-------|------|------|----------------|
|            | Mean             | S. D. | Mean           | S. D. |      |      |                |
| Aggression | 2.4              | 5.2   | 10.0           | 15.8  | 1921 | 2259 | 1831           |
| Depression | 3.0              | 4.0   | 10.0           | 16.7  | 1997 | 2183 |                |
| Withdrawal | 3.7              | 10.6  | 8.8            | 12.8  | 2030 | 2150 |                |
| Dependency | 3.4              | 5.4   | 8.8            | 11.5  | 1954 | 2226 |                |
| Likability | 4.9              | 5.2   | 11.1           | 13.4  | 2017 | 2163 |                |

Table 5. Mean total scores and standard deviations for last-born females compared to last-born males.

|            | Female<br>n = 47 |       | Male<br>n = 43 |       | R    | R'   | R <sub>a</sub> |
|------------|------------------|-------|----------------|-------|------|------|----------------|
|            | Mean             | S. D. | Mean           | S. D. |      |      |                |
| Aggression | 1.8              | 2.9   | 11.0           | 18.0  | 2044 | 1869 | 1714           |
| Depression | 3.4              | 4.3   | 12.3           | 16.4  | 2113 | 1800 |                |
| Withdrawal | 2.1              | 3.0   | 10.5           | 20.2  | 2064 | 1849 |                |
| Dependency | 2.9              | 4.7   | 9.2            | 12.2  | 2066 | 1847 |                |
| Likability | 4.1              | 3.2   | 10.5           | 19.7  | 1875 | 2038 |                |

results, those subjects with over 150 total nominations were taken out. This affected only males since no female received an extremely high number of nominations.

Table 6 shows the mean and standard deviation of first-born subjects as compared to last-born subjects after the subjects with an extremely high number of nominations were eliminated. The R score was found to be significant at the .05 level, thus the null hypothesis is rejected.

Table 6. Total nominations of all first-born subjects compared to all last-born subjects with extremely high nominations excluded.

|                   | First-born<br>n = 91 |      | Last-born<br>n = 87 |      | R     | R'    | R <sub>a</sub> |
|-------------------|----------------------|------|---------------------|------|-------|-------|----------------|
|                   | Mean                 | S.D. | Mean                | S.D. |       |       |                |
| Total Nominations | 39.3                 | 27.4 | 28.0                | 25.7 | 3747* | 11826 | 7111.5         |

N = number of subjects

S.D. = standard deviation

\* shows significance at the .05 level

Tables 7 and 8 show means of the total nominations for first and last-born children after the subjects with an extremely high number of nominations were omitted. No significant difference (at the .05 level) was found in Table 7 (first-born females as compared to first-born males), but significance was found in Table 8 (last-born subjects). Thus, when extremely high nominations of males were

Table 7. Mean total scores and standard deviations for first-born females compared to first-born males with extremely high nominations excluded.

|            | Females<br>n = 44 |       | Males<br>n = 47 |       | R    | R'   | Ra   |
|------------|-------------------|-------|-----------------|-------|------|------|------|
|            | Mean              | S. D. | Mean            | S. D. |      |      |      |
| Aggression | 2.4               | 5.2   | 6.8             | 2.6   | 1921 | 2127 | 1777 |
| Depression | 3.0               | 4.0   | 6.7             | 2.3   | 1997 | 2051 |      |
| Withdrawal | 3.7               | 10.6  | 7.5             | 10.5  | 2030 | 2018 |      |
| Dependency | 3.4               | 5.4   | 6.7             | 2.7   | 1954 | 2094 |      |
| Likability | 4.9               | 5.2   | 8.7             | 13.7  | 2017 | 2031 |      |

Table 8. Mean total scores and standard deviations for last-born females compared to last-born males with extremely high nominations excluded.

|            | Females<br>n = 47 |       | Males<br>n = 40 |       | R    | R'   | Ra   |
|------------|-------------------|-------|-----------------|-------|------|------|------|
|            | Mean              | S. D. | Mean            | S. D. |      |      |      |
| Aggression | 1.8               | 2.9   | 7.8             | 10.8  | 809* | 2711 | 1691 |
| Depression | 3.4               | 4.3   | 7.7             | 15.1  | 820* | 2700 |      |
| Withdrawal | 2.1               | 3.0   | 7.8             | 11.7  | 820* | 2700 |      |
| Dependency | 2.9               | 4.7   | 8.3             | 2.6   | 820* | 2700 |      |
| Likability | 4.1               | 3.2   | 10.4            | 25.0  | 820* | 2700 |      |

\* shows significance at the .05 level

omitted, there was a significant difference in last-born males as compared to females. Similarly, Table 9 shows a significant difference between first-born and last-born males after extremely high nominations were omitted.

Table 9. Mean total scores and standard deviations for first-born males compared to last-born males with extremely high nominations excluded.

|            | First-born<br>n = 47 |       | Last-born<br>n = 40 |       | R    | R'   | R <sub>a</sub> |
|------------|----------------------|-------|---------------------|-------|------|------|----------------|
|            | Mean                 | S. D. | Mean                | S. D. |      |      |                |
| Aggression | 6.8                  | 2.6   | 7.8                 | 10.8  | 809* | 2711 | 1691           |
| Depression | 6.7                  | 2.3   | 7.7                 | 15.1  | 820* | 2700 |                |
| Withdrawal | 7.5                  | 10.5  | 7.8                 | 11.7  | 820* | 2700 |                |
| Dependency | 6.7                  | 2.7   | 8.3                 | 2.6   | 820* | 2700 |                |
| Likability | 8.7                  | 13.7  | 10.4                | 25.0  | 820* | 2700 |                |

\* shows significance at the .05 level

At the .05 level of significance no differences were found to exist between mean values in the five behavioral categories for each sex (Tables 2 and 3), nor for each birth order positions (Tables 4 and 5).

A significant difference was found in comparing the mean of total nominations in first-born and last-born children (Table 1). Thus, the null hypothesis of no difference in peer acceptance of first-born compared to last-born children is rejected.

#### IV. CONCLUSIONS

The five behavior categories in the PNI showed no significant difference between the first-born and last-born children of like sex nor between children of unlike sex.

When no significant difference was found in comparing male and female subjects, as seen in Tables 2, 3, 4, and 5, those male subjects with nominations exceeding 150 were discarded so that a better distribution could be observed. After this was done significance was found in all cases (Tables 7, 8 and 9) except when first-born females are compared to first-born males (Table 7).

The subjects with a very high number of nominations were most well known, but this does not necessarily indicate that they were either more liked or more disliked. A few subjects received a high number of negative nominations which raised the mean of the males and implied that those subjects were well accepted by their peers. These negative nominations, however, do not seem to reflect acceptance but rather a negative type of popularity. This is one difficulty which may be inherent in this instrument.

Another possible explanation for the lack of significance may be that this author's changes in the PNI which were made to adapt it to the age level of the present subjects may have caused the internal consistency of the inventory to be altered. Thus, results may not be

as accurate as they could have been if no adaptations had been made or if the age of the subjects had been closer to that of the original sample studied by Winder and Wiggins (1961).

The male subjects had a noticeably larger number of nominations than female subjects regardless of ordinal position. This may be associated with the use of the male gender in the statements, or one might conclude that males are more frequently chosen than females by both sexed peers. This, however, has no solid basis in this study and can only be speculated upon at this time.

In comparing first-born and last-born children in terms of total nominations, (first-born children were found to be better accepted by their peers than last-born children.) This leads to the rejection of the null hypothesis which states that there is no difference in peer acceptance between first-born and last-born children. The difference found is slight, but it is significant at the .05 level.

These results are contrary to those of Schacter (1966) who found first-born children less accepted than later born children. Bossard (1956) and Schachter (1966) are also in disagreement with the findings of the present study because they see first-born children as less well-adjusted and thus, less well accepted. The results agree, however, with Sampson (1965) who stated that first-born children are more apt to achieve social eminence than last-born children. The disagreement in this area may result from the

instrument used to sample the population.

The instrument used in the present investigation might be better applied to a smaller sample size because of the necessity of recalling the names of appropriate peers for each statement. With the sample size used here, subjects may not consider all peers but only those with whom they come in contact. This was seen when looking over the individual inventories where subjects listed a maximum of only five to ten persons. Ideally, subjects would know most of their peers and be able to nominate them for the appropriate behavior thus leading to a greater number of individual nominations. This would help eliminate the problems that arise when a child has a limited number of friendships.

#### Value and Limitations of the Study

This study may, heuristically, generate new hypotheses concerning ordinal position and peer acceptance. This is reflected by the disagreement of this study with other previously done studies.

It appears that ordinal position influences peer acceptance, to some extent, and much research is possible in this area. It seems that a variety of hypotheses may be drawn from the several ordinal positions and results found using several types of instruments. Similar studies have been undertaken by Abernethy (1940), Sells and Roff (1963), and Cicirelli (1967).



One of the weaknesses of this study is that it was used on a large uncontrolled sample. Most samples average about 25 to 30 subjects as compared to the sample sizes here of 43, 44, 47, and 50. Since the instrument used was developed on a smaller sample, this was an experimental use of the Peer Nomination Inventory.

## V. SUMMARY

The purpose of this investigation was to test the null hypothesis that there is no difference in peer acceptance in first-born children as compared to last-born children. The sample population consisted of junior high school students (aged 11 years 10 months to 14 years 5 months).

The instrument used for this study was the Peer Nomination Inventory developed by Wiggins and Winder (1961) which groups statements into five behavioral areas (aggression, dependency, withdrawal, depression, and likability). The population was grouped on the basis of sex and ordinal position, and a comparison was made between first and last-born children of like and unlike sex. Total nominations of first-born and last-born children were also compared regardless of sex. Data were analyzed using the Wilcoxon-Mann-Whitney Test.

Results indicated a lack of significant difference in the five behavioral areas when like and unlike sexes were compared. A significant difference was found, however, when comparing total mean nominations of first-born and last-born children. These differences were analyzed in terms of the instrument used and their adaptability to other studies.

To better study the results, subjects with extremely high nominations were discarded and the samples were statistically tested

a second time. After deletion of high nominations, significance was found to exist at the .05 level. This enabled the results to be observed under different conditions.

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## APPENDIX



## APPENDIX

PEER NOMINATION INVENTORY SCALE  
(WIGGINS AND WINDER, 1961)

The following is a test to see what you and your friends think of one another. No one in this school will see the results, so answer the questions carefully and truthfully.

Please give the following information:

I am a (boy, girl)

I am \_\_\_\_\_ years old.

My name is \_\_\_\_\_

Below list all of your brothers and sisters:

| Name  | Age   | Real, step, foster, half |
|-------|-------|--------------------------|
| _____ | _____ | _____                    |
| _____ | _____ | _____                    |
| _____ | _____ | _____                    |
| _____ | _____ | _____                    |

INSTRUCTIONS: For each of the statements given, think of the person you know who best fits the statement and put his or her FULL name in the column provided.

1. He's absent from school alot.
2. He's pretty short.
3. He's always losing things.
4. He will always run around by himself.
5. No one runs around with him.
6. He's not interested in anything.

7. He does not join in any fun.
8. He's always acting up.
9. He is sort of ignored.
10. Someone makes fun of him and he gets mad.
11. When he doesn't get his own way, he gets real mad.
12. He likes an audience all the time.
13. He pouts if you hurt his feelings.
14. He gets real mad when he doesn't do something right.
15. He has lots of friends.
16. No matter what he does, it's wrong.
17. He feels a lack of attention.
18. Hardly anybody likes to run around with him.
19. He needs attention very badly.
20. He is one of the kids I like.
21. He talks to the teacher all the time.
22. He's a little too sensitive to everybody.
23. If someone gets in his way, he shoves them out of the way.
24. He's the kind of kid I like.
25. He's just plain mean.
26. He's really wild.
27. He feels left out.
28. He makes fun of people.
29. He's trying hard to get popular.

30. He's a good friend of mine.
31. He's always playing the clown and wants everybody to laugh at him.
32. He's not sure of himself in anything.
33. He doesn't want to do anything.
34. He says he can't do things.
35. He doesn't pay attention to the teacher.
36. He seems to have a chip on his shoulder.
37. He wants everything done for him.
38. He tries to get other people in trouble.
39. He gets mad when he doesn't know how to do something.
40. He always messes around and gets in trouble.
41. He's the last person picked.
42. He wants to show off in front of the kids.
43. I am one of his friends.
44. He'll talk out loud to get attention.
45. He says he can beat everybody up.
46. In the halls he just stands around.
47. He's sort of babyish all the time.
48. He just can't stand anybody laughing at him.
49. He tries to get attention.
50. He just seems sort of lost.
51. He's sort of unhappy.
52. He seems to think that he's nobody.

53. He does not have very many friends.
54. All the kids like him.
55. He acts as if he's sort of a baby.
56. He doesn't care to join in when we walk around together.
57. He likes to pick on little kids.
58. He's a good sport.
59. He's a nice guy.

The scoring procedures for the P.N.I. were to check the intensity scoring by tabulating the number of raters who nominated the subject on a given item. This raw score may range from zero to one less than the total number of raters present ( $n-1$ ), for the subjects did not rate themselves.

The items used on the PNI were identical to those used in the original test by Wiggins and Winder (1961) except for the three filler items dropped. The following is a list of the five behavioral categories and the item numbers which are included in each category:

- A. Aggression: 8, 11, 23, 25, 26, 28, 35, 36, 38, 40, 45, 57
- B. Dependency: 12, 17, 19, 21, 29, 31, 37, 42, 44, 47, 49, 55
- C. Withdrawal: 4, 5, 6, 7, 9, 18, 33, 41, 46, 50, 53, 56
- D. Depression: 10, 13, 14, 16, 22, 27, 32, 34, 39, 48, 51, 52
- E. Likeability: 1, 2, 3, 15, 20, 24, 30, 43, 54, 58, 59