

THE UNIVERSITY OF MANITOBA  
ORDINAL POSITION, SOCIAL DEPENDENCE, AND  
FIELD DEPENDENCE IN CHILDREN

by

MARILYN MALKIN

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## ABSTRACT

Prior research has shown that social dependency may be related to a person's serial position in his family. In this regard, Gewirtz (1948), Schachter (1959), and Sears (1963) have all found first borns to be more dependent than later borns. It has also been suggested that cognitive style (Witkin, et al., 1962) is related to social dependence (Crandall & Sinkeldam, 1966; Pedersen & Wender, 1968). The present study was an attempt to look at the interrelationship between ordinal position, social dependence, and field dependence.

It was hypothesized that first born children would be the most socially dependent as well as the most field dependent child in a three child family, and that a linear relationship would hold; i.e., that each successive child would be progressively less dependent.

Sixty 10-12 year old males from three child families participated in the study; 20 of them being first born in their families, 20 being second born, and 20 being third born. Three tasks were administered: a) the Children's Dependency Scale (CDS), a self rating of dependency; b) the Embedded Figures Test (EFT); and c) the Rod and Frame Test (RFT). Teachers also rated the children on six dimensions relating to dependency.

The results of the study were generally negative. In the two cases where significant differences were obtained, it was the middle child who was found to be most independent. Several explanations for the results were discussed.

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## CHAPTER I

### INTRODUCTION

The study of birth order and the role it plays in influencing personality and behaviour has generated a great deal of interest and research. Scientists, mothers and fathers, brothers and sisters; all have their own hypotheses about its role based on their own unique experiences. Adler was perhaps the first theorist to emphasize the importance of a child's position in the family and its effect on a child's development. He believed that serial position, although it did not make certain patterns of behaviour inevitable, did present situations making some behaviour patterns more likely than others (Ansbacher, 1956). Sears, Maccoby and Levin (1957) said that the differential treatment children receive as a result of their different ordinal position may be a factor affecting both personality and behaviour. One of the personality traits or behaviours which seems to be affected by differences due to ordinal positions is that of dependency (Schachter, 1959; Warren, 1966). Dependency begins early in childhood and tends to be sustained in its original form. The frequency of the dependent behaviour may decrease with age, but it does so in such a way that the child maintains his position in the group with respect to the frequency of dependent behaviour exhibited (Kagan & Moss, 1960; Martin, 1964). First born children have been found to be more dependent than later borns (Schachter, 1959; Warren, 1966). Sears et al. (1957) and Schachter (1959) have postulated parental inexperience,

parental inconsistency, and parental overprotection as aspects of differential treatment which contributed to the greater dependence of first borns.

Field-dependence-independence, a characteristic way of functioning perceptually and intellectually has also been found to be relatively stable across time (Witkin, 1965). Witkin suggests that field-dependence-independence, or cognitive styles, mirror different aspects of psychological make-up. Perhaps, then, they are also related to social dependence and, in turn, to ordinal position. This study is an attempt to determine if any relationship exists between ordinal position, social dependency, and field-dependence.

#### Birth Order Effects

A child's ordinal position in his family seems to have an effect on different traits and personality variables (Clausen, 1966; Warren, 1966). Those differences associated with ordinal position are to some extent contingent upon the sex of the child, the sex of the sibling, and the number of years separating a child and his sibs. Interactions between these variables have led to various findings. For example, it has been found that boys with a much older sister tend to be somewhat withdrawn and independent compared to boys with a much older brother (Koch, 1956); children in two child families with a male sib tend to be more competitive and tenacious of purpose (Koch, 1955); and children in opposite sex pairs tend to be more self confident and better adjusted socially (Koch, 1956). Cicirelli (1967) found that sex of the sibling was important in three child families where subjects with two

brothers had poorer IQ and reading scores than subjects with at least one sister. Sells and Roff (1964) found that youngest children tend to be accepted by peers whereas the second of more than two, the oldest and the middle child tend to be rejected. Concerning middle children, Toman (1970) said they must learn double or triple roles, i.e., different roles in relation to their different sibs, and are thus better prepared for more kinds of relationships when they are adults. On the other hand, Toman theorized that the middle child, since he must relate in different ways to his different sibs, may also be slightly confused as to his role in the family. Newbert (1969) agreed with this since she found the middle child to be significantly more vulnerable to maladjustment. She also related personality variables of the middle child to the sex of the other sibs. For example, she found that a girl with an older sister and a younger brother was more excitable and tense than the younger brother, whereas a girl with an older brother and a younger sister was more composed and relaxed than either sib. Newbert concluded that the middle child did differ significantly from his sibs in both personal adjustment and social adjustment.

Another reason for the consistent differences in personality variables as a function of ordinal position may be the consistent differences in experience between older and younger children, that is, uniformities of experience concomitant with a particular ordinal position. For instance, parents tend to be much more anxious and restrictive with first born children than with later borns (Schachter, 1959;

Sears, 1950). They are also overprotective towards first borns and inexperienced in their handling of them (Schachter, 1959). Parent-child interactions resulting from the child's ordinal position thus have an effect on personality development variables. Since the first born has no siblings with whom to identify, he will identify with the parents and may tend to develop a strong conscience and a harsh super-ego. In relation to later borns, first borns are more likely to conform (Sampson, 1962), to have stronger needs for affiliation (Dember, 1964; Harrison, 1964), and to be able to control their aggressive impulses better (Gewirtz, 1948; Koch, 1955).

Gewirtz (1948), Sears (1963), and Schachter (1959), have also found first borns to be more dependent than later borns. Schachter postulates parental overprotection, parental inconsistency, and parental inexperience as factors contributing to this dependency although none of these has received consistent support. Schachter also sees exact ordinal position as having an effect and he states that the effect of variables operates in a continuous fashion. The effects, then, are strongest for the early born and grow progressively weaker for later borns. If, in fact, the first born is dependent, the second born would be less dependent, and the third born even less so. The development of dependency then, is also related to the child's ordinal position in that children in different ordinal positions are treated differently both by their parents and their sibs.

#### Social Dependency

Dependency behaviour has been said to be a conspicuous feature

of early childhood (Maccoby & Masters, 1970). Schachter (1959) has defined dependence as "the extent to which the individual uses or relies on other persons as sources of approval, support, help, and reference." Hartup (1963) suggests that, "Whenever the individual gives evidence that people, as people are satisfying and rewarding, it may be said that the individual is behaving dependently." Hartup's definition emphasizes the child's seeking nearness, attention, and approval from adults for their own sake rather than as a means of satisfying other needs. Schachter, however, also recognizes instrumental dependency in that he sees relying on others for help as a dependent behaviour. Heathers (1955) divides dependency into two types: (a) instrumental dependency which refers to needs for help, and (b) emotional dependency which refers to needs for reassurance, affection, and approval.

Assuming that these definitions of dependency are valid, one might expect different types of behaviour to make up a dependency complex. Beller (1955) lists five types of behaviour which he says are interrelated and which constitute a generalized measure of dependency. These behaviours are physical contact, proximity, paying attention, help, and recognition or praise and approval. Heathers (1955) agrees that clinging, affection seeking, and approval seeking are part of a dependency complex but notes that clinging and affection seeking decline with age relative to approval seeking. Sears, Rau, and Alpert (1965) also list reassurance seeking, touching and holding, and being near as measures of dependency. They further

distinguish attention seeking as positive, i.e., seeking praise, or negative, i.e., getting attention by disruption. A factor analytic study (Gewirtz, 1956) relating to dependency behaviours, but dealing specifically with attention seeking behaviour, yielded three factors. Factor A included overt verbal behaviour, e.g., questions and comments employed to attract the adult's attention. Factor B included the number of paintings the child produced, the time it took him to do them and the number of glances he made at the adult. Gewirtz suggests that this factor might involve an achievement oriented response pattern designed to get the adult's attention, or it might be a response pattern for attention employed by the passive child. Factor C was not clearly identified; it included permission seeking, age of the child, number of paintings and glances. It might indicate inexperience or apprehensiveness. This study, while defining some of the behaviours involved in attention seeking, is relatively situation specific and the factors it lists would not likely be applicable to all research. They could, however, serve as a basis for delineating attention seeking behaviours.

An obvious and important question is how does a child become dependent and develop dependent behaviours? According to social learning theories (Sears et al., 1957; Sears et al., 1965) the child's attachment to the mother is based on her satisfying his needs. The strength of the child's dependency responses will depend upon the frequency with which they have been reinforced and the scheduling of the reinforcement. Sears also pointed out that dependent behaviours

which are appropriate and acceptable in infants, e.g., clinging and demanding behaviour, are seen as "changeworthy" by adults as the child grows older. These behaviours are then punished or no longer rewarded once they have become inappropriate. The degree to which mothers reward and punish behaviours influences the degree to which the child will manifest dependent behaviours. Dependency is thus, to some extent, a function of child rearing practices.

Haeberle (1958) analyzed the relationship between dependency and ordinal position. She used mildly disturbed nursery school children who were three to six years of age. They were rated by teachers on Beller's scales designed to measure overt dependency. The scales consisted of five measures: frequency of seeking help, proximity, contact, attention and recognition from adults. The results show that for both boys and girls, only children had higher dependency scores than first born children and first born children had higher scores than later born children. Dean (1947) investigated the personality characteristics of children from two-child families. Mothers rated their children by comparing them on a list of personality related items. First born children in this study also were judged to be more dependent than their siblings.

#### Field-Dependence-Independence

Research on modes of perceptual functioning demonstrates that people have consistent ways of functioning; they have a consistent style of perceiving which Witkin suggests (1967) cuts across intellectual activities as well as perceptual ones. In this way, these

cognitive styles (Witkin, 1962) have become linked to personality characteristics. Witkin labels these different modes or styles as field-dependent-independent. The field dependent mode involves a fusion of all the parts of the field and a domination by the overall organization of the field. The person characterized by a field dependent mode of perceiving would find it difficult to separate specific things--be they concrete or abstract, from the whole. This person is said to have a global approach in viewing things; he is influenced by the organization of the field and has difficulty in separating things from their embedding context. He also relies on external sources for a definition of attitudes and judgments and for a view of himself (Witkin, 1965). He is thus, dependent on others to some extent. A person who is field independent, on the other hand, has little or no difficulty in distinguishing an item from its context. If a field lacks structure he can impose a structure upon it. People characterized by this mode of perceiving are said to be analytical, or to perceive in an articulated or differentiated manner. They give evidence of a developed sense of separate identity and experience themselves as segregated and structured with an internal frame of reference (Witkin, 1965). One would anticipate that a person with a developed sense of identity, i.e., a field independent person, could function with little support and guidance from others, whereas the person with the limited sense of separate identity, i.e., the field dependent person, is likely to foster dependent attitudes.

Young children perceive in a field dependent way. As they grow

older their perception becomes more field independent although they remain the same in relation to their peers; a child who perceives in a more differentiated manner in relation to his peers at one stage of development will also show greater differentiation at later stages of development (Witkin, 1962). Children of the same age, then, differ in the extent to which they are differentiated. This greater or more limited differentiation is likely to be a characteristic of many areas of individual psychological functioning for children as well as for adults. If a child is field dependent, one would expect, that he would also rely on external sources as a frame of reference, and that he would be a dependent type of person. The opposite would be expected to hold for the field independent person.

A number of studies have been done relating field dependence to social dependence. Marlowe (1958) administered the Edwards Personal Preference Scale (EPPS) and the Thurstone Adaptation of the Gottschaldt Embedded Figures Test (EFT) to 57 female and 12 male undergraduates. He found that the intraception and succorance scales of the EPPS had significant correlations with field independence, i.e., field independence was associated with the need to be analytic in regard to the behaviour and motives of one's self and others, and it was also associated with a relative absence of passive-dependent needs.

Pedersen and Wender (1968) used 30 boys who were 6 1/2 years old. They were given the Children's EFT (CEFT) and as a measure of social dependence, were rated by their teacher on physical contact, attention seeking, orality and sustained directed activity. Physical

contact and orality were found to be predictive of field dependence while the other correlations showed a similar trend but were not significant.

Crandall and Sinkeldam (1966) tested 28 boys and 22 girls between the ages of 6 years 10 months and 12 years 5 months. They administered eleven items of Witkin's EFT as a measure of field dependence and used ratings on instrumental help seeking from adults, affection seeking from adults and approval seeking from adults as a measure of social dependence. They found only limited substantiation for the hypothesis that socially dependent children exhibit more perceptual dependence than do less socially dependent children. Affection seeking from adults was the only dependency variable significantly associated with field dependence. The other variables were positively correlated but the correlations were not significant. These indicate that field dependent subjects (Ss) do tend to be more submissive and passive, and more dependent on others in interpersonal relations than field independent Ss although some of the data do not show very strong relationships.

Elliott (1961) would argue that field dependent people do not always act dependently. He says instead that they tend to "react with disruption and ineffectiveness in the face of strong or unstructured stimulus configurations." As a measure of behavioural dependence he used the number of times S requested help and moral support in a virtually impossible puzzle solving task. He found no evidence that field dependent subjects tend to ask for help more than field

independent subjects in a difficult task.

Konstadt and Forman (1965) found that field dependent children were more attuned to signs of approval than field independent children. Their sample consisted of 20 boys and 18 girls in 4th grade, one-half of whom were field dependent as measured by the CEFT, and one-half of whom were field independent. These children were given a letter cancellation task under conditions of approval and disapproval. The field dependent children showed poorer performance under the disapproval conditions and they also gazed at people more frequently than field independent Ss under the disapproval conditions. Thus, when taking a test under stress, the Ss with a more global approach showed greater attention to the attitudes of those around them; they seemed to be more concerned with the impression they made.

These studies suggest that there is a consistent positive relationship between social dependence and field dependence even though this relationship is not a very strong one. The research relating birth order and field dependence, on the other hand, is much more contradictory.

Stewart (1962), in studying the relationship between birth order and dependence divided his sample of male college students into five groups: oldest brother of brothers, oldest brother of sisters, youngest brother of brothers, youngest brother of sisters, and a random group. All groups except the random group were matched on number of children in the family, sex of sibs, presence of parents during childhood, and socioeconomic status (father's occupation).

Stewart then administered the Interpersonal Check List, Barron Ego Strength Items, and Jackson's short form of the EFT. He found the EFT uniquely significant in that the oldest of brothers and sisters was more field dependent than the youngest of brothers and sisters. This study suggests that field dependence may be related to birth order.

Culver and Dunham (1960) used 150 student nurses between the ages of 17 and 18 years. They administered four tests of spatial-perceptual ability: the Rod and Frame Test (RFT), the Gottschaldt EFT, a test of tactile localization, and a test of laterality discrimination. Contrary to Stewart, they found no significant relationship between birth order and field dependence.

#### Statement of the Problem

The present study is an attempt to relate ordinal position, looking with particular interest at the middle child, to social dependence and field dependence. The above research suggests that field dependence may be related to birth order (Stewart, 1962); that field dependence may be related to social dependence (Crandall & Sinkeldam, 1966; Konstadt & Forman, 1965; Pedersen & Wender, 1968); and that social dependence is related to birth order (Schachter, 1959). On the basis of these findings it was hypothesized that:

1. First born children will be the most dependent sibling in a three child family, with the middle child being intermediate. This hypothesis holds for social dependence as well as field dependence. Social dependence being measured by the child's self report of his

instrumental and emotional dependency and by teachers' ratings of a) instrumental help seeking from adults and peers, b) affection and emotional support seeking from adults and peers, and c) recognition seeking for achievement from adults and peers. Field dependence was measured by the Embedded Figures Test (EFT) and the Rod and Frame Test (RFT).

2. There would be a significant correlation between all measures of social and field dependence.

## CHAPTER II

### METHOD

#### Subjects

The Ss were 60 male children in Grades 5 and 6 from schools in Greater Winnipeg. They were boys from three child families; 20 of them being the first born child in the family; 20 of them being the second born, and 20 being the third born. The sample consisted of the first 60 children tested from a population of 110 males from three child families, ranging in age from 10 years 2 months to 12 years 6 months. Ss' mean age was 11 years 8 months. Two-thirds of the sample came from the first two schools used in the study. The first 60 children that E requested were cooperative and agreed to participate in the study.

All of the schools participating in the study were in middle or upper class areas of the city as measured by Hollingshead and Redlich's (1958) index of socioeconomic status. Furthermore, there was no significant difference between the groups' socioeconomic status (see Appendix F, Table 1).

Sibs of all Ss ranged in age from 4 to 19; all were in school and living at home. The breakdown of S's sibs in terms of mean age and sex is presented in Appendix F (Table 2).

#### Measures

Children's self rating of dependency. The Children's Dependency Scale (CDS) (Golightly, Nelson, & Johnson, 1970) was used. It consisted of 65 true-false items measuring instrumental and emotional

dependency (see Appendix A). An example from the scale of an item measuring instrumental dependency is number 6: I ask my teacher a lot of questions; and an example of an item measuring emotional dependency is number 10: I like to have my mother hug me a lot.

Teachers' rating scales. Three rating scales which were adaptations of scales developed at the Fels Research Institute (Grandall & Sinkeldam, 1964) were used. The scales measured a) instrumental help seeking from adults and peers; b) affection and emotional support seeking from adults and peers; and c) recognition seeking for achievement from adults and peers. Each category contained a title and a general definition of the variable along with examples of behaviour which should and should not be used in making the ratings. The scales were seven point scales with number 1 indicating that the child displayed the behaviour described often and frequently, and number 7 indicating that he rarely or never displayed the behaviour (see Appendix B).

Embedded Figures Test (EFT). The first 12 figures of Witkin's (1950) embedded figures test were used. These figures were individually encased in transparent plastic. S used a rubber-tipped stylus to indicate his response. A stop watch was used to measure time to solution.

Rod and Frame Test (RFT). A vertical rod and frame apparatus, designed by the Polymetric Company (model V-1260 M2) was employed. The dimensions of the apparatus were as follows: square frame, 42" x 42"; upright rod, 39"; width of luminous strip, 7/8". The rod and

frame were both pivoted at the same central point and they could be rotated to the right or left independently of each other by means of levers on a remote control panel. Rotation of the rod was also possible by means of a lever independent of the control panel. An angle scale and index points were provided on the control panel to indicate the amount of angular offset of the rod and frame.

### Procedure

After the Ss had been selected from the available population, they were contacted at the school. Ss from each school were spoken to as a group and were asked if they would like to participate in an experiment. They were told that the experiment was part of a project that E was doing and that it had nothing to do with their school work. If they decided to participate they would have to complete three tasks, these being: 1) the completion of a 65 item questionnaire which required them to indicate, for each statement whether or not they do what is described (CDS); 2) a task like the puzzles in the comics which ask you to find the wolf hidden in the forest (EFT); and 3) sitting in a darkened room and adjusting a shiny rod which has been tilted, so that it is straight up and down (RFT). They were told that this task would take place at the University of Manitoba and to complete it they would be driven to the University in groups of 5 and then would be driven back to the school when all 5 of the children had completed the task. After being told what the experiment would involve, the children were asked if they would like to participate in it. Those that agreed were given a letter to be signed by their parents giving consent for their

child to participate (Appendix E). The children were asked to return the signed letter to their teacher the next day. Once parental consent had been obtained, testing began.

The EFT was administered at the school. S was seated at a table beside E and the standard instructions (see Appendix C) were read to him. On all trials, S was required to find the simple design in the complex figure and to trace around it with the stylus. A practice trial was administered but was not scored. Three minutes were allowed for correct solution and S's score was the total time in seconds that it took him to find the 12 simple forms in the complex figures.

After the completion of the EFT, S remained in the room to fill out the CDS. He was told to circle T for those items which were true for him, and to circle F for those items which were not true, i.e., false. When he had completed the questionnaire he returned to his classroom and the next child was tested.

The RFT was administered at the University of Manitoba, Ss having been transported from the school to the University by E. Testing on the RFT was done outside of school time, i.e., at noon or after four o'clock. S was blindfolded and led into a completely darkened room whose walls had been painted black. He was seated in a chair 7 feet away from the apparatus and facing it. The instructions (Appendix D) were read to him and any questions answered. Eight trials with the chair upright were administered consisting of 2 trials each of the following conditions: frame tilted right and rod tilted right; frame left and rod left; frame right and rod left; frame left and rod right.

Both the rod and frame were tilted 28 degrees on all trials. Illumination was held constant over all trials and was set at a level which allowed S to perceive the apparatus clearly but which did not allow perception of the contours of the room. A small red light was switched on and directed at the control panel between trials to facilitate the readings. S's score was the mean degrees absolute deviation of the rod from the true upright.

The teachers involved in the study, i.e., those who taught Ss participating in the study, were contacted at the school by E. The rating scales were distributed to them and the teacher was asked to read over the instructions and the items. Any questions he or she had concerning the questionnaire were answered at this time. The teacher was asked to complete the questionnaire within the next few days at which time E picked them up.

## CHAPTER III

### RESULTS

One-way analyses of variance were conducted on each of the dependent measures relating ordinal position, (i.e., first, second, or last born in a three child family) and social or field dependence. The results of these analyses are summarized in Table I. The children's self rating of dependency (CDS) was not found to be related to their ordinal position. Of the three dimensions pertaining to adults on the teacher's rating scale, neither instrumental help seeking nor affection and emotional support seeking were significant. However, recognition seeking for achievement from adults was significantly related to ordinal position ( $F = 6.46$ ,  $df = 2/57$ ,  $p < .01$ ) and a trend was evident for instrumental help seeking from peers ( $F = 2.72$ ,  $df = 2/57$ ,  $p < .10$ ). A post hoc analysis using Duncan's multiple range test was done for these measures. The difference between second and third borns was significant ( $\underline{w}_3 = 1.29$ ,  $df = 2/57$ ,  $p < .01$ ) for recognition seeking for achievement from adults with second borns being most independent. There was also a significant difference between first and second borns on this dimension ( $\underline{w}_2 = .932$ ,  $df = 2/57$ ,  $p < .05$ ). For instrumental help seeking from peers the difference between second and third borns was significant ( $\underline{w}_3 = .927$ ,  $df = 2/57$ ,  $p < .05$ ) with the second borns again being most independent. These results were not consistent with the hypothesis that it would be the third borns who would be the most independent. Neither of the other two dimensions

TABLE I

Summary of One-Way Analyses of Variance for Social  
Dependence and Field Dependence

Source of Variation	df	SS	MS	F
Children's Dependency Scale				
Birth Order	2	29.7412	14.8706	1.04
Within Cells	57	814.2007	14.2842	
Instrumental Help Seeking - Adults				
Birth Order	2	1.5997	0.7999	0.37
Within Cells	57	124.0505	2.1763	
Affection and Emotional Support Seeking - Adults				
Birth Order	2	6.6330	3.3165	1.15
Within Cells	57	164.3506	2.8833	
Recognition Seeking for Achievement - Adults				
Birth Order	2	28.2330	14.1165	6.46**
Within Cells	57	124.5005	2.1842	
Instrumental Help Seeking - Peers				
Birth Order	2	10.5331	5.2666	2.72*
Within Cells	57	110.4502	1.9377	
Attention and Emotional Support Seeking - Peers				
Birth Order	2	4.0332	2.0166	0.87
Within Cells	57	132.5503	2.3254	
Recognition Seeking for Achievement - Peers				
Birth Order	2	4.4330	2.2165	0.85
Within Cells	57	148.5505	2.6061	
Embedded Figures Test				
Birth Order	2	6760.0	3380.0	0.02
Within Cells	57	7854848.0	137804.31	
Rod and Frame Test				
Birth Order	2	.7858	.3929	0.03
Within Cells	57	714.4343	12.5339	

\*p < .10

\*\*p < .01

relating to peers, i.e., affection and emotional support seeking, or recognition seeking for achievement was significant. Results of the analyses for the EFT did not confirm the hypotheses; nor did results of the analyses for the RFT.

An examination of the means for each ordinal position (Table 2) shows a tendency for middle children to be rated by their teachers as the most socially independent child on five of the six items of the teachers' rating scale, while on the self rating scale Ss from the middle group rated themselves as the most socially dependent. On both the EFT and the RFT Ss from the middle group had the intermediate scores.

Pearson product moment correlations were computed between all measures of social dependence and field dependence. The correlations are presented in Table 3. The CDS was significantly correlated ( $p < .05$ ) only with affection and emotional support seeking from adults on the teachers' rating scale. The teachers' ratings were all significantly intercorrelated ( $p < .01$ ) except for instrumental help seeking from adults which was correlated with recognition seeking for achievement from peers ( $p < .05$ ). The three dimensions dealing with peers also correlated with the RFT ( $p < .05$ ) as did instrumental help seeking from adults. The EFT and the RFT were negatively correlated with each other ( $p < .02$ ). The CDS was also negatively correlated with the EFT and the RFT although these correlations were not significant.

TABLE 2

Means of Variables Measuring Social Dependence  
and Field Dependence

Variable	First Born	Second Born	Third Born
Children's Dependency Scale <sup>1</sup>	11.20	11.80	10.10
Instrumental Help Seeking - Adults <sup>2</sup>	4.55	4.35	4.15
Affection and Emotional Support Seeking - Adults <sup>2</sup>	4.80	5.45	4.70
Recognition Seeking for Achievement - Adults <sup>2</sup>	4.25	5.35	3.70
Instrumental Help Seeking - Peers <sup>2</sup>	5.45	5.75	4.75
Affection and Emotional Support Seeking - Peers <sup>2</sup>	4.90	5.45	4.90
Recognition Seeking for Achievement - Peers <sup>2</sup>	4.60	4.80	4.15
Embedded Figures Test <sup>1</sup>	1000.05	985.95	974.05
Rod & Frame Test <sup>1</sup>	4.30	4.39	4.57

<sup>1</sup> Higher score indicates greater dependence.

<sup>2</sup> Higher score indicates greater independence.

TABLE 3

## Intercorrelations of Dependent Measures

	CDS	Inst. Adults	Affect. Adults	Recog. Adults	Inst. Peers	Affect. Peers	Recog. Peers	EFT	RFT
Children's Dependency Scale (CDS)	1.000								
Instrumental Help Seek- ing - Adults	.236								
Affection and Emotional Support Seeking - Adults	.261	.610**							
Recognition for Achievement - Adults	.225	.382**	.702**						
Instrumental Help Seeking - Peers	.004	.433**	.454**	.337**					
Affection and Emotional Support Seeking - Peers	.009	.330**	.491**	.359**	.696**				
Recognition for Achievement - Peers	.058	.297*	.436**	.521**	.545**	.605**			
Embedded Figures Test (EFT)	-.223	.103	.083	.127	.135	.151	.114		
Rod and Frame Test (RFT)	-.169	.255*	.148	.183	.285*	.293*	.253*	-.309*	1.000

\*p &lt; .05

\*\*p &lt; .01

Signs of the EFT, RFT, and CDS have been inverted to make them positive.

## CHAPTER IV

### DISCUSSION

The hypothesis that first born children would be the most socially dependent sibling in a three child family with the middle child being intermediate was not supported; nor was the hypothesis that first born children would be most field dependent with the middle child being intermediate. These negative results are not that surprising since the literature in the areas of birth order, social dependence, field dependence, and their interrelationships, is somewhat confusing. The birth order research (Dean, 1947; Haeberle, 1958) indicates that first borns are judged as more socially dependent than later borns, while the research relating birth order and field dependence shows contradictory results regarding the most field dependent sibling (Culver & Dunham, 1960; Stewart, 1962). The literature also indicates a trend for social dependence to be related to field dependence (Crandall & Sinkeldam, 1966; Pedersen & Wender, 1968) although these relationships are not very strong.

There were two exceptions to the generally negative results of this study. These were the dimensions of recognition seeking for achievement from adults and instrumental help seeking from peers on the teachers rating scale. In both of these cases, social dependency was related to birth order, but it was the middle child who was found to be the most independent sibling, rather than the first born as hypothesized. These results appear consistent with Toman's suggestion (1970) that

middle children learn different roles in relation to different sibs and, as a result, they are better prepared for more kinds of relationships. This preparing for more kinds of relationships may in some way affect the development of independence in the middle child. This is pure speculation, however, and caution is necessary in interpreting these results since the middle child's independence was found on only two of the nine dependent measures.

It is interesting to note that although the middle child is seen by others as the most independent sibling, he sees himself as the most dependent (Table 2).

Again, this might be support for Toman's (1970) suggestion that the middle child is apt to be confused by the different roles he has to play, or that the child responds differently in different environments (home and school) or that he sees himself differently than others see him. The middle child in a three child family may also be the one who is "left out." As one mother interviewed in the study by Sears, Maccoby and Levin (1957, p. 408) stated:

"Of course, I think the middle child takes an awful beating - they are just sort of pushed in between. They don't get as much attention as the first one got, and, of course, the last one gets all the loving, they're the baby. The middle one is sort of the lost one, I think."

The results of this study appear to be less a function of the dependent variable of interest than the method by which the variable was assessed. Paper and pencil self reports and ratings by others were used as measures of social dependency; perceptual tests were used as measures of field dependence. In using these different methods of

measurement each source of measurement seems to have produced its own unique pattern of results (see Table 2). It is difficult to come to any definitive conclusion other than that the results of this investigation are largely a function of the method variance.

A difficulty with the construct of social dependency is the confusion as to exactly what it is and its entanglement with other constructs such as affiliation and conformity.

For example, when Schachter defines dependence as the "extent to which the individual uses or relies on other persons as sources of approval, support, help, and reference" (1959) he might also be referring to affiliation. Confusion in dealing with the construct of dependency may come as well when terms such as "passive" and "active" dependency (Kagan & Moss, 1962) or "instrumental" versus "emotional" dependency (Heathers, 1955) are used. To avoid such confusion, these terms must be explicitly defined when they are employed. Related to this is the fact that in rating several behaviours including dependency behaviour, dependency often does not appear to be a coherent dimension for ordering differences in children's behaviour (Beller, 1959; Kagan & Moss, 1962). Perhaps the term dependency is too global a term on which to rate people, in which case it should be divided into sub-concepts for more meaningful research.

The CDS on which the children rated themselves regarding dependency showed low correlations with other dimensions used in the study. In the development of the CDS, for practical purposes, low correlations were obtained between teachers' ratings of dependency and

the child's self report (Golightly, Nelson, & Johnson, 1970). Similarly, low practical correlations were rated in the present investigation. In this sense, the present study provides no additional construct validity for the CDS. Contrary to the developers' suggestion that any relationship found between a new instrument and ratings by untrained individuals is encouraging, the repeated inability to demonstrate convergent validity for an instrument leads one to question its utility as an adequate assessment device. Further refinement of the CDS seems warranted before it can be used as a variable instrument for assessing dependency.

In conducting further research along these lines it seems important, although difficult and costly, to undertake longitudinal investigations. The developmental aspects of social and field dependence and the mechanisms by which they are transmitted could then be more closely observed as opposed to a global correlational approach, so often used in the birth order research.

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APPENDIX A

## Grade School Attitude Questionnaire

Name \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_

- T F 1. When I was little, I had an invisible friend.
- T F 2. My mother lets me choose the clothes she buys for me.
- T F 3. I like to be just a little sick so I can have meals in bed
- T F 4. I often telephone my friends.
- T F 5. I don't like to have my face washed.
- T F 6. I ask my teacher a lot of questions.
- T F 7. My parents like all my friends.
- T F 8. When my toys break, I try very hard to fix them.
- T F 9. My mother brings me to school.
- T F 10. I like to have my mother hug me a lot.
- T F 11. If I get up first I get my own breakfast.
- T F 12. My mother gets everything ready when I take a bath.
- T F 13. My parents let me go to the movies by myself.
- T F 14. I never walk anywhere if I can get my parents to drive me.
- T F 15. I would rather have someone give me a present than just money.
- T F 16. My mother doesn't let the other kids pick on me.
- T F 17. I always try to do what my friends want me to do.
- T F 18. Sometimes I spend the night at my friends house.
- T F 19. I would like to be a teddybear.
- T F 20. When I have to buy a present for someone I usually pick it out myself.
- T F 21. I think it's fun when it thunders.

- T F 22. I go swimming with my friends.
- T F 23. I forget where I put things pretty often.
- T F 24. Sometimes I like to play by myself.
- T F 25. My mother helps me choose what to wear to school each day.
- T F 26. Sometimes I stay home alone.
- T F 27. I read funnies in the newspaper.
- T F 28. Drawing is more fun when I can draw what I want to draw.
- T F 29. I'd rather have someone read to me than have to read something myself.
- T F 30. Sometimes my mother helps me cut up my meat at supper.
- T F 31. I try daredevil tricks on my bicycle.
- T F 32. Kids have more fun than grownups.
- T F 33. I will be glad when I am old enough to go anywhere I want to all by myself.
- T F 34. I would like to be five years old again.
- T F 35. I'd like to live in a cave.
- T F 36. My parents make me save part of my money.
- T F 37. I I can't find anyone to play with, my mother gives me something to do.
- T F 38. I try very hard to keep my clothes clean.
- T F 39. I get sick a lot.
- T F 40. Drawing is more fun when the teacher tells us what to draw.
- T F 41. I get hurt a lot.
- T F 42. I don't like to go outdoors alone after dark.
- T F 43. It is better to go along with the other kids most of the time.
- T F 44. I go shopping by myself sometimes.

- T F 45. There is no sense studying hard if the teacher never notices.
- T F 46. I polish my own shoes.
- T F 47. I wouldn't want a friend no one else liked.
- T F 48. I often get home from school late.
- T F 49. I seldom write letters unless it is for schoolwork.
- T F 50. I won't go downtown by myself.
- T F 51. Grownups are too bossy.
- T F 52. Sometimes I ride the bus alone.
- T F 53. I would like to own a tiger.
- T F 54. I wish my best friend and I could buy some clothes alike.
- T F 55. I wouldn't care if some people didn't like me.
- T F 56. I check with my teacher often to make sure I'm doing things right.
- T F 57. I like to have someone help me with my schoolwork.
- T F 58. If I don't know how to spell a word I usually ask someone.
- T F 59. After I finish my class work I wait for the teacher to give me something else to do.
- T F 60. I wouldn't mind going to the dentist by myself.
- T F 61. People tell me what to do too often.
- T F 62. I would like to ride in a plane.
- T F 63. Most of the time my mother takes me with her when she goes visiting.
- T F 64. I like to go exploring by myself.
- T F 65. I like to have someone help me pick a book when I go to the library.

**APPENDIX B**

The following is a list of behaviours - three pertaining to ways in which a child interacts with adults, and three pertaining to ways in which he interacts with his peers. Please read the definition, noting whether it refers to behaviour towards adults or peers. Then rate the child by circling the number from high - #1, to low - #7, which you think is most appropriate to him. Ratings are to be made for each child using children of the same age as the base of comparison.

Name of child \_\_\_\_\_

Age \_\_\_\_\_

Grade \_\_\_\_\_

Instrumental Help Seeking from Adults

Instrumental help seeking from adults refers to requests for aid in beginning or carrying out an activity, assistance in solving problems, asking to be shown how to do something, going to an adult when being threatened by another child and requesting adult help in social situations. Intensity of the request and the actual need for help should be considered. For example, if the help asked is realistic, e.g., requests for unavailable supplies, etc., this should be rated, but much lower. This should be rated because some children never ask for anything no matter how badly it is needed.

High			Medium			Low
1	2	3	4	5	6	7
Numerous pleas for adult assistance, rarely tries anything new or difficult without seeking help. Asks help both in social situations and in carrying out school activities.			Asks realistic help when a task is unusually difficult or to get unavailable materials. May occasionally seek social help.			Rarely, if ever, seeks any help even when it is realistically necessary. May occasionally ask some adult assistance but most always handles problems independently.

Affection and Emotional Support Seeking from Adults

Affection and emotional support seeking from adults refers to all affectionate displays, attempts to gain affectionate attention, and seeking bodily contact. Also included are seeking emotional support after being rejected or hurt and singling out an adult to smile at or stay near.

High			Medium			Low
1	2	3	4	5	6	7
Frequent and prolonged demands for affection. Often goes to adults for emotional support.			Occasional attempts to gain affectionate attention. If hurt or rejected may go for comfort or affection, but leaves after a short time.			Rarely, if ever, seeks adult affection or comfort. May do so very occasionally.

Recognition Seeking for Achievement from Adults

Recognition seeking for achievement from adults refers to attempts to get praise or recognition for accomplishments, skills or products. Do not include recognition seeking for possessions or efforts to gain attention through showing off or acting silly. Examples of this type of behavior are asking to be watched when playing a game or asking the teacher to "come see what I made".

High			Medium			Low
1	2	3	4	5	6	7
Frequently shows off accomplishments.			Sometimes shows off accomplishments especially if particularly proud of something.			Rarely or never shows accomplishments.

Instrumental Help Seeking from Peers

Instrumental help seeking from peers refers to requests for aid in beginning or carrying out an activity, assistance in solving problems or asking to be shown how to do something. It includes going to a peer when being threatened by another child. Intensity of the request and actual need for help should be considered in making this rating.

High			Medium			Low
1	2	3	4	5	6	7
Numerous pleas for peer assistance, rarely trying anything new or difficult without seeking help. Asks help in both social situations and school activities.			Asks realistic help when a task is unusually difficult. May occasionally seek social help.			Rarely, if ever, seeks any help. May occasionally ask some peer assistance but most always handles problems independently.

Affection and Emotional Support Seeking from Peers

Affection and emotional support seeking from peers refers to all affectionate displays, attempts to gain affectionate attention, and seeking bodily contact. Also included is the seeking of emotional support from a peer after being physically hurt or rejected by another child. Examples of this behaviour are clinging to another child or seeking out another child after having been hurt.

High			Medium			Low
1	2	3	4	5	6	7
Frequent and prolonged demands for attention. Often goes to peers for emotional support.			Occasional attempts to gain affectionate peer attention. If hurt or rejected, may go for affection and comfort, but leaves after a short time.			Rarely, if ever, seeks peer affection or comfort. May do so very occasionally.

Recognition Seeking for Achievement from Peers

Recognition seeking for achievements from peers refers to all attempts to get praise or recognition from peers for accomplishments, skills or products.

High		Medium			Low	
1	2	3	4	5	6	7
Frequently shows off accomplishments to peers.		Sometimes shows off accomplishments to peers, especially if particularly proud of something.			Rarely, or never shows off accomplishments to peers.	

APPENDIX C

### Instructions for the Embedded Figures Test

"I am going to show you a series of coloured designs. Each time I show you one, I want you to describe it in any way you wish. I will then show you a simpler figure which is contained in the larger design. You will then be given the larger design again, and your job will be to find the simpler figure in it. Let us go through a practice trial to show you how it is done. (P-X is presented for 15 seconds, then P is presented for 10 seconds). I will show you the coloured design again and you are to find the simple figure in it. As soon as you have found the simple figure let me know, and start tracing it with this pencil. When you are tracing, do not let the pencil touch the surface of the card.

This is how we will proceed on all trials. In every case, the simple figure will be present in the larger design. It will always be in an upright position, so don't turn the card around. There may be several of the simple figures in the same larger design but you are to look only for the one in the upright position. Work as quickly as you can since I will be timing you but be sure that the figure you find is exactly the same as the original simple figure in shape and size. As soon as you have found the figure tell me at once and then start to trace it. If you ever forget what the simple figure looks like you may ask to see it again and you may do so as often as you like.

Are there any questions?"

APPENDIX D

## Instructions for Rod and Frame Test

"When you take off the blindfold you will see in front of you a shining rod and frame. Over here (E guides S's hand) is a switch that can be pushed left or right. When you push it left the rod turns left; when you push it right the rod turns right. Your job is going to be to adjust the rod so that it is straight up and down. Show me what I mean by straight up and down. (E has S demonstrate with his finger or arm what is meant by straight up and down.) When you have finished adjusting the rod so that it is straight up and down, tell me and then put your blindfold on again.

Are there any questions? We will begin."

**APPENDIX E**

Dear Parent:

I am working on my master's degree in the Department of Psychology at the University of Manitoba. I will be running my thesis study in the next six weeks. The thesis is designed to study the relationship between birth order, i.e., whether a child is first born, second born or third born in his family, and various aspects of dependency. Since I am selecting at random children from three child families, and since your child has indicated that he is from such a family, I would like your consent to have him participate in this project. This will involve having him complete three tasks. The first of these will be a questionnaire containing items such as: "My mother gets everything ready when I take a bath." or "I ask my teacher a lot of questions." The other two tasks are tasks of perceptual functioning involving the ability to ignore external cues in order to complete the task. One of these perceptual tasks must be carried out at the University. For this, your child will be driven to the University and returned in about 90 minutes to the school once the task is completed. The results are for research purposes only, and will not be used in any other way.

I would very much appreciate your consent and cooperation. I believe this project is an important area for study and may add to a better understanding of the development of different characteristics in children.

If you consent, please sign below and have your child return this form to his teacher. Thank you for your cooperation in this matter.

Sincerely,

Marilyn Malkin.

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Parent's signature.

APPENDIX F

TABLE I

Frequency of Children in Each Socioeconomic  
Class According to Father's Occupation

Class	Oldest Group	Middle Group	Youngest Group	Total Group
1	2	4	4	10
2	5	5	4	14
3	4	2	6	12
4	5	6	6	17
5	4	3	0	7
6				
7				

$$\chi^2 = 6.77 \quad df = 8$$

$$p > .5$$

TABLE 2

Mean Ages of Ss' Sibs

Subjects	Oldest	Middle	Youngest
Oldest		$\bar{X}_M = 9.3$ $N = 12$ $\bar{X}_F = 8.3$ $N = 8$	$\bar{X}_M = 4.9$ $N = 8$ $\bar{X}_F = 6.5$ $N = 12$
Middle	$\bar{X}_M = 13.6$ $N = 12$ $\bar{X}_F = 13.5$ $N = 8$		$\bar{X}_M = 7.2$ $N = 11$ $\bar{X}_F = 6.8$ $N = 9$
Youngest	$\bar{X}_M = 17.8$ $N = 12$ $\bar{X}_F = 16.9$ $N = 8$	$\bar{X}_M = 13.6$ $N = 11$ $\bar{X}_F = 14.9$ $N = 9$	

$\bar{X}_M$  = Mean age of male sibs.

$\bar{X}_F$  = Mean age of female sibs.