

THESIS



ABSTRACT

SIBLINGS AND SOCIALIZATION

by Diana TenHouten

The role of the sibling in the nuclear family has not been clearly defined by social scientists. An effort is made in this work to define the sibling role with respect to the function of siblings in the early socialization of the child. It is suggested that the sibling is a major agent of socialization to egalitarian roles within the nuclear family.

A set of propositions is developed regarding the role socialization process. It is suggested that the mechanism by which peer role socialization occurs is that of models of ongoing peer interaction. The older sibling and his peers are purported to provide such models of peer interaction to younger siblings. It is further advanced that due to structural conditions in modern, urban, industrial society, other sources of such models are limited. Thus it is hypothesized that younger siblings will demonstrate superior socialization to peer roles as compared with older siblings. A review of the research literature reveals that research findings are consistent with this prediction.

An observational study is then detailed in which a number of research hypotheses generated from this prediction are tested. This observational design is augmented by a home interview designed to establish the existence of the conditions described in the theoretical state descriptions. In general, the findings of the empirical study

Diana TenHouten

are supportive to the theoretical scheme offered. Due to a small sample size, no firm conclusions are reached; however, as the results of several measures were in the direction predicted and as the research literature was readily organized by this scheme, it is believed that the theoretical position is viable.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF TABLES	iv
Chapter	
I. AN INTRODUCTION TO THE PROBLEM	1
II. A THEORY OF SOCIALIZATION	3
III. REVIEW OF THE LITERATURE	20
IV. THE RESEARCH DESIGN	36
V. ANALYSIS OF THE RESULTS	46
VI. SUMMARY AND CONCLUSIONS	72
LIST OF REFERENCES	77

LIST OF TABLES

Table		Page
1	The Average Number of Cross-sex Groups Chosen in Six Observation Periods . .	47
2	The Average Group Size of the Groups Elected by Younger and Older Siblings, Averaged Over Six Observation Periods .	48
3	The Average Number of Roles Played within Groups Elected by Older and Younger Siblings	49
4	The Average Number of Changes in Group Choice Made During One Observation Period	50
5	The Average Number of Claims Made Upon an Adult for Approval During One Observation Period	52
6	The Average Number of Claims Made Upon an Adult for Assistance During One Obser- vation Period	52
7	Peer Group Participation	53
8	The Number of Times a Child was Observed to Make an Invitation During 6 Observa- tion Periods	55
9	The Number of Times a Child was Observed to Join an Ongoing Group During 6 Obser- vation Periods	55
10	The Average Number of Cross-sex Groups Chosen in Six Observation Periods for Rural Children	56
11	The Average Group Size of the Groups Elected by Younger and Older Siblings, Averaged Over Six Observation Periods for Rural Children	56
12	The Average Number of Roles Played Within Groups Elected by Older and Younger Siblings for Rural Children	57
13	The Average Number of Changes in Group Choice Made During One Observation Period For Rural Children	57

Table		Page
14	The Average Number of Claims Made Upon an Adult for Approval During One Observation Period for Rural Children	57
15	The Average Number of Claims Made Upon an Adult for Assistance During One Observation Period for Rural Children	57
16	Peer Group Participation for Rural Children	58
17	The Number of Times a Child was Observed to Make an Invitation During 6 Observation Periods For Rural Children	58
18	The Number of Times a Child was Observed to Join an Ongoing Group During 6 Observation Periods for Rural Children	58
19	The Stability of the Neighborhood Play Group	60
20	The Number of Times a Child Chooses to Play With Peers	60
21	Peer Orientation of Subjects	61
22	Friendliness to Peers	62
23	Independance of Subjects	65
24	The Stability of the Neighborhood Play Group for Rural Children	65
25	The Number of Times a Child Chooses to Play With Peers, for Rural Children	66
26	Peer Orientation of Rural Subjects	66
27	Friendliness to Peers for Rural Children .	66
28	Independance of Rural Subjects	66

CHAPTER I
AN INTRODUCTION TO THE PROBLEM

From time to time, social scientists have given some passing consideration to the effects of ordinal birth position upon the individual. The largest effort was made in the late 1920's and early 1930's when a relationship between ordinal position and physical characteristics such as intelligence was sought. No consistent relationships were found,¹ and the effort to renew the investigation of siblings has been only sporadic since then. To be sure, psychoanalytic theory has advanced some thoughts on siblings, but these have been mostly concerned with the effects of the presence of siblings in different positions on the parent-child relationship. Little theoretical speculation has been done upon the possible nature of the role of sibling, or the sibling relationship, which exists apart from the child-parent-child triangle.

Yet there would seem to be a great deal of informal evidence suggesting that sibling roles and sibling relationships do exist. The society at large recognizes this in such expressions as "he is like a brother to me". We can all intuit that this is a special relationship. The society

¹
G. Murphy, L.B. Murphy & T. Newcomb, "Birth Order," Experimental Social Psychology, (New York, Harper, 1937), pp. 348-363.

has further institutionalized this concept in such organizations as sororities and fraternities. Also, it is a frequent practice among institutions which must socialize new members, to assign a "big brother" or "big sister" who is responsible for teaching the new member the norms and practices of the institution. A national organization called the Big Brother Organization further exemplifies the intuitive recognition in society of the function of siblings.

In each of the last two examples, the sibling is seen as a socializing agent. It is this socialization function of the sibling which will be explored in the following paper. The position developed here is that the sibling relationship can be defined in terms of its place in the early socialization of the child and that this conception can be utilized in the investigation of socialization itself.

In Chapter II, a theory of socialization of children by their siblings is displayed. It is proposed in this theory, that siblings are primary agents of socialization to peer roles. In Chapter III, an attempt is made to organize the existing research literature on differences in personality with respect to ordinal position, in terms of this theoretical framework. A research design is presented in Chapter IV which tests the major theorems drawn from the theory and adds support to the theoretical propositions. In Chapter V, the research findings are reported and analyzed. The final chapter is a summary of the research findings and an evaluation of the research undertaking.

CHAPTER II

A THEORY OF SOCIALIZATION

A theory which provides an adequate framework for understanding the role of siblings in the socialization process has not yet been explicated. It is the object of this chapter to explicate such a theory. To begin, it may be useful to review the work of Parsons and Bales on early family socialization.

1

In Family, Socialization and Interaction Process,

Parsons and Bales state that there are four basic roles in the family. These roles are male parent, female parent, male child, and female child. The parents have roles which are differentiated with respect to both power and instrumental expressive priority, with the male parent's role predominating in instrumentality and the female parent's role predominating in expressiveness. The father, then, is instrumental superior, and the mother is expressive superior. Similarly, the male child is instrumental inferior, and the female child is expressive inferior.

Comprehension of these roles is a basic process in socialization of the child. It involves gaining an understanding of both the nature of each role and the relationships

1

Talcott Parsons and Robert F. Bales, in collaboration with James Olds, Morris Selditch, Jr., and Phillip E. Slater, Family, Socialization and Interaction Process (Glencoe, Illinois: The Free Press, 1955).

between roles. Parsons and Bales show that after the child has learned the roles and role relationships in the nuclear family role system, he extends outside the family to learn more complex systems of roles.

In describing the system of roles in the nuclear family, Parsons is also deliniating the relationship between roles. It is within the context of role relationships, after all, that roles are totally comprehended, and that socializing interaction occurs. Parsons follows Freud here in considering only the parent-parent relationship and the parent-child relationship; nowhere in his work could a reference be found to a child-child or sibling relationship.

Elsewhere in the sociological and psychological literature a few references are found to siblings, but in these also, the emphasis is upon the ramifications of ordinal position for the parent-child relationship. The most familiar example is Freud's treatment of sibling rivalry. There~~has~~ also been some discussion of changes in child rearing practices for first and later children, due to parental inexperience and uneasiness with a first child.² Neither type of discussion provides much insight into the nature of the sibling relationship itself.

Before proceeding, two concepts which will be used

2

Robert Sears, "Ordinal Position in the Family as a Psychological Variable," American Sociological Review, 15 (1950), p. 397-401.

extensively in this presentation should be defined at the outset. The first is the concept of role, and the second is that of socialization.

Role will be used in a common sociological sense, to mean the behavior of an actor in a particular social position. Sargent's definition expresses this: "a person's role is a pattern or type of social behavior which seems situationally appropriate to him in terms of the demands and expectations of those in the group."³

The definition of socialization demands a somewhat more extensive discussion. Definitions of socialization which are current in sociology are largely functional, such as the one found in Chinoy's introductory text: Socialization "transforms the infant into a person capable of participating in social life."⁴ Such a conceptualization does not readily generate measures of socialization. In order to facilitate the measurement of socialization in this study, a structural definition was sought. One was found to have been developed by W. TenHouten⁵ which will be adopted in this text.

³Stansfield Sargent, "Concepts of Role and Ego in Contemporary Psychology," in John H. Rohrer and Muzafer Sherif, eds., Social Psychology at the Crossroads (New York: Harper and Brothers, 1951), p. 360.

⁴Ely Chinoy, Society (New York: Random House, 1961) p. 334.

⁵Warren TenHouten, Socialization, Race, and The American High School an unpublished report, Cooperative Research Project No. S-031, Michigan State University (1965), pp. 86-93.

TenHouten shows, through a development of the work of Murphy, Piaget, and others, that socialization can be viewed as a process of sociological growth which occurs in stages, progressing from undifferentiated perception, through the differentiation of perceptions and functions, to integration of differentiated functions into a co-ordinated whole. Socialization is then defined as the "progressive attainment of differentiated, and then integrated interpersonal role relationships..." with those in the social environment.⁶ From this definition it follows that certain predictions can be made about the role relationships a subject will be able to form at various levels of socialization. In the present study, some predictions are made about the structure of groups chosen by children at different levels of socialization to peer roles. It would follow from this conceptualization of socialization that a highly socialized child might participate in groups which are high in differentiated roles, and in integration of roles.

⁶
Ibid, p. 48.

Some Theoretical Propositions

Looking again at Parsons' formulation it is found that he believes the child to perceive both roles and distinctions between roles in two ways: as a participant in a role relationship and as a member of the system in which the role relationship, to which he may be extraneous, occurs. Thus Parsons speaks of the child first perceiving the role of the mother, then of the father, and second, perceiving the power differential between them, (the power differential being a vital part of their relationship). Expanding this description, we can say that the child witnesses ongoing interaction which gives him comprehension of a role relationship, and consequently a role. It is not always the case, then, that he is a participant in the interaction from which he is learning. In order to complete his picture of a role, however, he must see it being played in its relationship to other roles in the system. Thus the initial proposition can be formulated.

Proposition 1. Interaction role models facilitate socialization to the roles involved in the interaction.

The conditions necessary for role learning to take place effectively are explicated by Cottrell in the form of several principles. One which will be supportive to Proposition 1 states:

The degree of adjustment to a future role varies directly

with the amount of opportunities for:

- a. Emotionally intimate contact which allows identification with persons functioning in that role.
- b. Imagined or incipient rehearsal in the future role, and
- c. Practice in the role through play or similar activity.⁷

It is interesting to note that the conditions of this principle are met only when an interaction role model exists which the child can see or in relationship to which he can function. An example is the role of mother. The female child has a role relationship with the mother in the context of which she learns how the mother functions in a mother-child relationship, she learns a significant part of the mother role. In order to understand the mother role completely, she must also understand how the mother relates to the father. Although she cannot act in this relationship, condition a is still met because she can watch the ongoing relationship between her parents. Having this experience she is able to "play house" with friends, and perhaps play at her mother's role with her father thereby accomplishing b and c.

A further consideration of Parson's work leads to the development of second and third propositions. The nuclear

⁷Leonard S. Cottrell, Jr., "The Adjustment of the Individual to His Age and Sex Roles," American Sociological Review, 7 (1942), pp. 617-620.

family relationships, as characterized by Parsons, involve only one basic type of interaction. The mother-father relationship and the parent-child relationship are both based upon superordinate-subordinate interaction, since the roles have an hierarchical order. However, the larger social systems outside of the family include a great many role relationships based upon a second type of interaction, that of interaction between social equals. This is peer interaction, or egalitarian interaction. This might be stated explicitly as an assumption:

Assumption: Interaction is of two general kinds: (1) Interaction between incumbents of non-equivalent roles, or superordinate-subordinate interaction and (2) Interaction between incumbents of equivalent roles, or peer interaction.

Considering Proposition 1 and this assumption, two less general propositions can be formulated:

Proposition 2: Superordinate-subordinate interaction models facilitate learning superordinate-subordinate roles.

Proposition 3: Peer interaction models facilitate learning peer roles.

The child will certainly be called upon early to play a peer role with playmates and classmates in school. In trying to imagine the possible sources of peer interaction models

available before the child extends beyond the family into these systems, three possibilities become apparent. The first is a model which the parents might provide by interacting with each other in a peer relationship. This source, while logically possible, is probably not productive because peer interaction by parents in front of young children is not frequent. It must be remembered that parents usually act within their family roles when they are with their children, and in this context they are not peers; they are instead super-ordinate and subordinate. The second possible source is the interaction of parents with their own peers. It is possible that they might carry on peer relationships with friends within the context of the home, so that their interaction would be visible to young children. The third source is that of an older sibling. The sibling-sibling relationship itself may, depending upon the age disparity between the siblings, be an egalitarian one, analogous to a peer relationship. The child may thus gain some direct experience in egalitarian interaction which will develop skills he can use in peer roles. But most importantly, the older sibling and his own peers enter the home during play and provide a ready source of peer interaction models. Their peer relationship is highly visible to the younger sibling and allows him ample opportunity to imitate their behavior patterns, thereby rehearsing the peer role. The older sibling can function in

this way regardless of age difference. At this point a fourth proposition arises:

Proposition 4: Older sibling-peer interaction, and parent-peer interaction are two chief possible sources of peer interaction role models within the nuclear family setting.

The compliment of this proposition should also be made explicit:

Proposition 5: Mother-father interaction and parent-child interaction provided the chief possible sources of super-ordinate-subordinate interaction role models.

Structural Conditions of Peer Socialization in Modern Industrial Society

Having set up some framework for discussing the possible significance of ordinal position let us now look at the situation posed by modern, urban, industrial society.

The emergence of urban or suburban residential areas and of industrialization has resulted in the removal of most adult males from the daytime environment of the child. There has been some discussion of the problem that this creates for male children in conceiving of a male occupational role.⁸ Other ramifications also suggest themselves. As there are few

8

Frederick Elkin, The Child and Society: The processes of Socialization, (New York: Random House, 1960), p. 54.
Warren TenHouten, Socialization, Race and the American High School, Unpublished report, Cooperative Research Project No. S-031, Michigan State University (1965), pp. 86-93

adult males in the community, children have few opportunities to witness adult male peer interaction or adult male-female peer interaction. The mother is unlikely to interact with male peers during the day; although she may encounter male employees in the grocery store, such interaction would not constitute peer interaction. The father himself is of course absent from the residential community, and with him, his male peers. When the parents conjointly entertain their peers in the evening, the children are usually in bed or with a babysitter. The fathers male peer interaction usually occurs away from home, at work, while stopping for a drink after work, at a card party, or on a hunting trip. None of these activities is visible to the young child. The only adult peer interaction which may be seen regularly in many cases, is the female interaction which occurs between neighbors. The results of this can be seen in the fact that little girls do have "tea parties" in which their interaction patterns mimic those of their mothers but little boys do not have "bull sessions", or "poker parties."

A child with an older sibling, however, has an alternate set of models of all kinds of peer interaction. In an urban residential community, where children of a similar age are usually plentiful, it seems likely that an older sibling might bring friends into the home to play while the younger sibling is still too young to leave the home environment

unsupervised. The younger child may not be included in the play of the group at all, but how the group functions is highly visible to him, and probably of great interest. If the older sibling is a male, this fills a particularly wide gap for the young child because models involving males are otherwise absent from his environment. However, whatever the sex of the older sibling, it is probable that on some occasions he brings home friends of both sexes, thus providing at least some relevant models. It is also true that the younger male sibling especially needs an older sibling functioning in this way since male children are lacking in both same sex and cross-sex models, while female children lack only cross-sex models.

The opportunity to watch the ongoing play of peers gives the younger sibling a decided advantage when he is required to meet his own peers. Consider too, the possible extensions of the play situation which the younger sibling watches. If he expresses prolonged interest and desire to play, he may be allowed some limited and conditional participation in the group. The older sibling and his peers may allow him to play, for example, if he promises not to quit before the game is over, or not to cry if he gets hurt, or to be a good sport. Thus he gets an early introduction to peer group norms such as "not being a quitter or a crybaby." It is also an introduction in which the norms are stated very explicitly; he does not

have to discern them as he would in a group of his own peers. Here is a situation which satisfies Cottrell's condition requiring opportunities for incipient role rehearsal. The younger sibling is allowed to learn the peer group norms directly and with little at stake. If he fails to meet the conditions set for him he faces only temporary banishment, but this is hardly as severe as rejection by his own peer group later might be. Because he is younger, allowances will be made; his failure will not be "held against him" permanently by his brother and he cannot be meaningfully rejected as a peer because he never was really a peer.

The oldest child has no alternative source of peer interaction models. He is dependant upon learning by experience when he enters his own peer group, potentially a much more painful experience.

Both older and younger siblings have adequate access to superordinate-subordinate interaction models within the family. It might be imagined that the older sibling will learn these roles somewhat better than the younger as he has the entire attention of the parents for a short time and is perhaps allowed to act as a junior parent or parent's helper more often than the younger sibling. Further, as he knows these roles well he may cultivate them later in his development as a source of satisfaction. There is some suggestion in the research literature that first born children are high in

qualities of leadership, seriousness, studiousness and so forth which may well be a result of this early experience.⁹ This line of thought might prove rewarding in a future study.

As a younger child reaches school age, he might be predicted to meet his peers with more assurance, anticipation, and skill than the older sibling. His prior acquaintance with peer interaction might lead him to early success and this success might motivate him to pursue peer relationships even more vigorously.

Thus from the general propositions and the preceding state description the following theorems are deduced:

Theorem 1: In urban industrial society, the presence of older siblings facilitates socialization to peer roles.

In the foregoing discussion it was mentioned that older male siblings were of particular advantage in peer socialization due to the fact that the lack of other males in the environment is greater than the lack of other females. Similarly, it was stated that males benefited more from the presence of older siblings than females as they lacked other sources of both same sex and cross sex interaction models. The reasoning used here can be stated in the form of a final proposition:

⁹Literature which demonstrates this is cited in Chapter 3

Proposition 6: The extent to which a model of interaction facilitates socialization is inversely related to the available number of other models of the same interaction.

Specifically, because the mother and other females provide same sex interaction models for female children, the addition of a second set of models provided by an older female sibling will not be as important to the younger female sibling as the set of same sex male models provided by an older brother will be to a younger male sibling.

Adding this proposition to the others and again considering the state description developed in this section, two theorems follow:

Theorem 2: In urban, industrial society, the presence of older male siblings has greater effect than the presence of older female siblings.

Theorem 3: In urban, industrial society, the presence of older siblings has greater effect for males than for females.

Structural Conditions of Peer Role Socialization in a Rural Environment

In order to establish more firmly the viability of this theoretical formulation, another possible state description is considered. An observable living pattern which differs in some important respects from the urban pattern described in the first state description, is the rural life in this society.

In a rural family in which the father is a full time farmer, the adult male is not absent from the home during the daytime. Furthermore he probably has a work sharing arrangement with other farmers so that he does interact with his male peers in the presence of the children. When the men come in to eat, or work in the barn they are visible to the children. They interact with each other and with the mother, thus providing both cross-sex and same sex models. It is also more customary for rural children to be included in the evening social activities of the parents. They are brought along to adult gatherings and left to play around until they fall asleep instead of left with a babysitter.

We might expect that rural siblings will present essentially same opportunities as do urban siblings. However, if a full set of models is already available, a second set cannot be expected to produce highly differentiated socialization. The reasoning again is that which was expressed in Proposition 6.

In other words, since both younger and older siblings have one set of adequate peer interaction models in a rural setting, the addition of a second source for younger siblings will not produce differentiation from older siblings in socialization to peer roles expected between urban younger and older siblings. Thus we can state a final theorem, using Propositions 1 through 7 and State Description 2:

Theorem 4: The relationship of peer socialization to ordinal position will be lower for rural than for urban children.

The propositions and theorems will now be collected so that the theoretical scheme can be seen.

ASSUMPTION: Interaction is of two general kinds: (1) Interaction between incumbents of non-equivalent roles, or superordinate-subordinate interaction; (2) Interaction between incumbents of equivalent roles, or peer interaction.

PROPOSITIONS

1. Interaction role models facilitate socialization to the involved roles.
2. Superordinate-subordinate interaction role models facilitate learning superordinate-subordinate roles.
3. Peer interaction role models facilitate learning peer roles.
4. Mother-father interaction and parent-child interaction are the chief possible sources of superordinate-subordinate interaction models.
5. Parent-peer interaction and sibling peer interaction are the chief possible sources of peer interaction models in the nuclear family setting.
6. The extent to which a model of interaction facilitates socialization is inversely related to the available number of other models of the interaction.

STATE DESCRIPTION I

In urban industrial society, older siblings provide models of peer interaction, but parents are largely unable to provide such models.

THEOREMS

- 1: In urban, industrial society, the presence of older siblings facilitates socialization to peer roles.
- 2: In urban, industrial society, the presence of older male siblings has greater effect than the presence of older female siblings.

- 3: In urban, industrial society, the presence of older siblings will have greater effect for males than for females.

STATE DESCRIPTION II

In rural society, parent-peer interaction and sibling-peer interaction are both available sources of peer interaction models.

THEOREM 4: The relationship of peer socialization to ordinal position will be lower for rural than for urban children.

In the present research design only Theorems 1 and 4 will be tested. It was not possible to test the full set of theorems in this design due to practical limitations. Some provision will also be made in the design to gain support for the two state descriptions and to gain direct support for Propositions 3 and 5. In the review of the literature which follows, existing research findings will also be brought to bear on Theorems 2 and 3.

CHAPTER III

REVIEW OF THE LITERATURE

There are a limited number of empirical studies which deal with ordinal position as a variable. Among them, very few suggest a theoretical framework within which the empirical results can be understood. There are, however, certain empirical results which have appeared repeatedly. It is believed that the scheme presented in Chapter II does provide an adequate framework for organizing these results. In this chapter the research findings will be organized with respect to the first three theorems of Chapter II. An effort will be made to show that all statistically significant findings can be understood in terms of this theoretical scheme. Chapter III will be concluded with a short discussion of some alternative explanations which have been offered for some of the data.

Theorem I: In an urban, industrial society, the presence of older siblings facilitates socialization to peer roles.

A number of studies have been concerned with the relationship of ordinal position to social success. It is expected that younger siblings should demonstrate higher social success than do older siblings, since younger siblings possess more skills in peer roles. In general the research literature confirms this expectation.

In sociometric studies of school children it has been found that younger siblings rank higher in popularity.¹ Further studies of school children indicate that younger siblings are generally described by teachers, observers and other children as more popular, sociable, and well liked.² Among college males Schacter found that younger siblings are better liked in their fraternities than are older siblings.³ Similar findings are reported by MacArthur who further stated that younger siblings of college age feel more confident of their contribution to the group than do older siblings.⁴ Singer also found that later born college students are more successful at manipulating people.⁵

¹S.W. Becker, M.J. Lerner and Jean Carroll, Conformity as a Function of Birth Order Payoff and Type of Group Pressure, Journal of Abnormal and Social Psychology, 69 (1964) pp. 318-323. Helen Koch, "Some Personality Correlates of Sex, Sibling Position, and Sex of Sibling," Genetic Psychology Monographs (Springfield, Massachusetts: The Journal Press, (1955)).

²J.G.S. Bossard and Eleanor S. Boll, "Personality Roles in the Large Family," Child Development, 26 (1955), pp. 71-78. Ralph Patterson and T.W. Ziegler, "Ordinal Position and Schizophrenia," American Journal of Psychiatry, 98 (1941), pp. 455-456; Charles MacArthur, "Personalities of First and Second Children," Psychiatry, 19 (1956), pp. 47-54; Koch, Ibid.

³Stanley Schacter, The Psychology of Affiliation (Stanford California: Stanford University Press, 1959).

⁴MacArthur, op. cit., p. 49.

⁵Jerome E. Singer, "The Use of Manipulative Strategies: Machiavellianism and Attractiveness," Sociometry, 24 (1964), pp. 128-150.

Evidence which might be interpreted as contrary to this theorem is found only in Singer's data. He reported that older and younger females date with equal frequency. It might be argued in this case that dating behavior constitutes something quite different from other peer behavior. The number of dates acquired might, for example, be based upon appearance or visibility. Thus, in order for dating to be an index of successful peer role playing, more would have to be known about the dating relationships that were formed.

With the preceding exception no evidence was found to refute the conclusion that younger siblings are more socially successful than older siblings. At the same time, there is some evidence to suggest that both younger and older siblings aspire to social success with peers to about the same degree. MacArthur presented some data gathered in questionnaires of college students which show that older siblings evaluated themselves more poorly in peer interaction skills, but did not place less value on these skills.⁶ Singer also found that younger and older siblings valued equally the ability to manipulate others.⁷ Thus, although both older and younger siblings aspire to success in interpersonal relations, younger siblings

⁶MacArthur, op. cit., p. 49.

⁷Singer, op. cit., p. 146.

are most able to realize these aspirations.

A second class of studies has dealt with the relationship of personality variables to ordinal position. Some of the earliest work in this area was done by Koch.⁸ She produced a series of papers on different aspects of an analysis of five and six year old school children. Data were collected on the personality attributes of each child as evaluated by a teacher and an observer. The personality evaluations revealed significant differences on the following traits:

First born children were given more to anger, were more intensely emotional, were more disturbed by defeat, were more articulate, and were more concerned about status than were later born children. Later born children were more cheerful, more affectionate, and more indifferent to adults than were first born.⁹

By similar observational techniques MacArthur found younger siblings to be more peer oriented, more friendly and easy going than older siblings while older siblings were observed to be more adult oriented, more sensitive and more

⁸Koch, op. cit.; Helen Koch, "Attitudes of Young Children Toward Their Peers as Related to Certain Characteristics of Their Siblings," Psychological Monographs: General and Applied (Washington: American Psychological Association, 1956), pp. 1-41; Helen Koch, "The Relation of Certain Formal Attributes of Siblings Toward Each Other and to Their Parents."

⁹Koch, "Some Personality Correlates. . .," op. cit.

serious than were younger siblings.¹⁰ It was also found in MacArthur's study, and in a similar one by Sears,¹¹ that mothers see their first children as more serious, shy, studious, conscientious, fond of adult company, self-reliant and undemonstrative than younger siblings. Second children were described as placid, friendly, cheerful, stubborn, rebellious, easy to care for, unstudious and indifferent to adults compared to older children.

A similar picture is compiled in other observational studies.¹² In general, the research literature seems to suggest a picture of the first child, as serious, adult oriented, and sensitive. The younger sibling is characterized as friendly, easy going, peer oriented, and perhaps rebellious or indifferent to adults. These personality correlates of ordinal position are as expected in consideration of the theory and they can be seen as supportive to Theorem I. A child with the early socialization experience of a younger sibling might be expected to enter early peer groups with ease and with

¹⁰ MacArthur, op. cit.

¹¹ Robert R. Sears, "Ordinal Position in the Family as a Psychological Variable," American Sociological Review, 15 (1950), pp. 397-401.

¹² Pauline S. Sears, "Doll Play Agression in Normal Young Children: Influence of Sex, Age, Sibling Status, Father's Absence," Psychological Monographs 65(1951) No. 6; Jean W. McFarlane, Lucile Allen and Marjorie Houzik, "A Developmental Study of the Behavioral Problems of Normal Children Between 21 Months and 14 Years," University of California Publications in Child Development, 2(1954).

some anticipation of the peer role. His familiarity with the peer role would lead him to relatively early mastery of it and thus to the qualities of friendliness, relaxation, and independence of adults. His aspirations to the role and the experience of success might be expected to produce a higher peer orientation in him, and thus his comparative indifference, or rebelliousness with respect to adults. On the other hand, a child with the limited peer socialization of a first child might be expected to be uneasy as he entered early peer groups. His lack of acquaintance with peer roles might lead him to welcome opportunities to interact with adults and to give attention to what will gain him some success. Thus he is led to the development of an adult orientation, a desire for achievement, etc.

A third class of very recent studies has been concerned with relationships of certain behavioral variables to ordinal position. The experimental work of Schacter has provided impetus for most of this research. He finds that in anxiety produced situations, first born subjects demonstrate the highest need for affiliation.¹³ These findings are supported by the work of several other researchers.¹⁴ Two unpublished

¹³Schacter, op. cit.

¹⁴W.M. Deuber, "Birth Order and Need Affiliation," American Psychologist, 18(1963, p. 356; H.B. Gerard and J.M. Rabbie, "Fear and Social Comparison, Journal of Abnormal and Social Psychology, 62(1961, p. 155-159; J.E. Dittes and P.C. Capsa, "Affiliation: Comparability or Compatibility," American Psychologist, 17(1962), p. 329.

experimental studies established no relationship.¹⁵ Studies have been in disagreement as to the relationship between anxiety level (in content-free anxiety tests) and ordinal position.¹⁶ It seems that the relationship between anxiety and ordinal position lies in the reaction to anxiety feelings. This is not inconsistent with the theory as it has been emphasized that no relationship can be expected between emotional adjustment and ordinal position. The discrepancies in results on tests of anxiety are perhaps due to the method used to produce the anxiety. We would expect that subjects of different ordinal position might be better suited to deal with different kinds of anxiety arousing situations. For example, in a study by Dittes, anxiety was aroused by leading subjects to believe that

¹⁵E.E. Sampson and F.J. Hancock, "Ordinal Position, Socialization, Personality Development, and Conformity," Unpub. NIMH Grant (M-5747) 1962; H. Rosenfelt, "Relationships of Ordinal Position to Affiliation and Achievement Motives: Direction and Generality," Unpub. report 1964.

¹⁶Ruby Yaryan and L. Festinger, "Preparatory Action and Belief in the Probable Occurrence of Future Events," Journal of Abnormal and Social Psychology, 63(1961), pp. 603-606; L. Weller, "The Relationship of Birth Order to Anxiety," Sociometry 25(1962), pp. 415-417; R.K. Moore, "Susceptibility to Hypnosis and Susceptibility to Social Influence," Journal of Abnormal and Social Psychology, 68(1964), pp. 282-294; Gerard and Rabbi, Op. cit.; J.E. Dittes, "Birth Order and Vulnerability to Differences in Acceptance," American Psychologist, 16(1961), p. 358; Dittes and Capra, op. cit.

they were not accepted by other members of the group. Dittes found that in this situation first born subjects responded with considerably more anxiety than did later born.¹⁷ In another study, Weller found no relationship between birth order and anxiety; the fear arousing situation was an anticipated electric shock.¹⁸ The different results can be explained as follows: In the first study (Dittes), it can be expected that the first born subject, having less confidence in his ability to play the peer role, would be more threatened by indications of disapproval by a set of peers than would later born subjects. This explanation is supported by another study in which the researchers found that first born subjects respond to reaction by peers with counter rejection, impulsive closure on cognitive tasks and conformity.¹⁹ In the second study (Weller), however, the anxiety stimulæ, the electric shock, in no way involved the interpersonal roles of the participants. Thus, it would be expected that there would be no difference in response with respect to birth order.

Schacter has also been concerned with sociometric choice patterns. In a recent article, he found that the first born subjects tend to choose friends on the basis of the prevailing

¹⁷Dittes, op. cit.

¹⁸Weller, op. cit.

¹⁹Dittes, and Capra, op. cit.

evaluation of the prospective friend by other, while later born subjects respond more to personal interests and needs.²⁰ This too can be seen as an indication that older siblings feel uncertain in peer roles. The assurance of the younger sibling allows him some independence in his choice of friends, just as it allowed him freedom from anxiety when he acted against a set of peers in the aforementioned anxiety experiment.

So far we have seen that some relationships between social success, personality, behavior, and ordinal position are consistent with Theorem 1.

Theorem II: In an urban, industrial society, the presence of older male siblings has greater effect than the presence of older female siblings.

Only a small amount of data exists in which breakdowns have been made with respect to the sex of the sibling.

The most complete work here was again done by Helen Koch. In her research it was reported that younger females with older brothers are rated significantly higher in popularity than any other group.²¹ They also are most able

²⁰ Stanley Schacter, "Birth Order and Sociometric Choice", Journal of Abnormal and Social Psychology, 68(1964), pp. 453-456.

²¹ Koch, "Some Personality Correlates...", op. cit.

to give a detailed account of male family roles and have the highest respect for the father's role of any group.²² Children of both sexes with older brothers were rated higher in competitiveness, ambition, enthusiasm and decisiveness than the other children.²³

Hillinger in a study employing the introversion scale of Mitteneker and Toman, found that children with older brothers were significantly less introverted than other groups.²⁴

The final study in which breakdowns by sex of sibling appear was done by W. TenHouten.²⁵ In it he found that Negro boys with older brothers had significantly higher sociometric status than other Negro boys.

In all three studies the evidence is consistent with Theorem II.

Theorem III: In urban, industrial society, the presence of an older sibling is more important for males than for females.

Koch's data shows that personality difference between first and later born males is significantly greater than the

²² Koch, "The Relation of Certain Formal Attributes...", op. cit.

²³ Koch, "Some Personality Correlates...", op. cit.

²⁴ Franz Hillinger, "Introversion und Stellung in der Geschwisterreihe" Zeitschrift fur Experimentelle und Angewandte Psychologie, 5(1958, pp. 268-276.

²⁵ Warren TenHouten, op. cit.

difference between first and later born females.²⁶ The same pattern can be seen in Singer's work, first born females having higher manipulative skills than first born males.²⁷

In TenHouten's work, the advantage of having an older sibling reaches significance only for Negro males with older brothers based on several measures of sociometric status and adjudgment.²⁸

An experimental study of Sarnoff and Zimbardo resulted in significant differences in affiliative tendencies under anxiety only for males. Differences between females of first and later ordinal position were also in the direction predicted, but not significant.²⁹

Only in Hillenger's study was no difference found between males and females.³⁰ Other studies have not differentiated according to sex of subject.

It should now be shown that relationships between other variables and ordinal position which would not be expected in terms of this theoretical scheme are not evident in the research literature. Those variables which have been repeatedly tested

²⁶ Koch, "Some Personality Correlates...", op. cit.

²⁷ Singer, op. cit.

²⁸ TenHouten, op. cit.

²⁹ Sarnoff and Zimbardo, op. cit.

³⁰ Hillinger, op. cit.

with ordinal position are intelligence, other physical traits, incidence of disease, mental illness, emotional adjustment and achievement.

In A Handbook of Child Psychology, Jones has reviewed 250 studies of ordinal position as related to intelligence, other physical traits and incidence of disease. There are 88 references on intelligence as related to ordinal position. He concludes that no relationship between any of these variables and intelligence can be established.³¹ A later article by Murphy, Murphy and Newcomb summarizes 40 articles on the relationship of intelligence and adjustment to birth order. The results are contradictory and inconclusive, and lead to no systematic relationship.³² Since that time, these relationships have been tested in few studies. Damarin conducted one study in which she tested several aspects of adjustment with birth order. She found birth order had no effect on intelligence, achievement or adjustment.³³ Another was done by Stagner and

³¹ Harold Ellis Jones, "Order of Birth," in C. Murchison (Ed.), A Handbook of Child Psychology (Worcester, Mass.: Clark University Press, 1931), pp. 204-241.

³² G. Murphy, L.B. Murphy and T. Newcomb, "Birth Order," Experimental Social Psychology, (New York, Harper, 1937), pp. 348-363.

³³ Dora E. Damarin, "Family Size, Sibling Age, Sex and Position as Related to Certain Aspects of Adjustment," Journal of Social Psychology, 29 (1949), pp. 93-102.

Katzoff. They tested personality adjustment with ordinal position and found no relationship.³⁴

Although it is clearly established that birth order does not effect intelligence, there is some evidence to suggest that high achievement is associated with first and only children.³⁵ This might be expected, as first and only children are rated high in seriousness, introversion and adult-orientation; all of which might lead them to be high achievers.

Finally in regard to ordinal position and mental health, no clear relationship has been established. One study of commitment to an institution finds a higher proportion of younger females than older females.³⁶ However, other studies have found no relationship.

In conclusion it should be demonstrated that other attempts to provide a theoretical framework within which the

³⁴ R. Stagner and D.T. Katzoff, "The Personality as Related to Birth Order and Family Size," Journal of Abnormal and Social Psychology, 20(1936), pp. 340-346.

³⁵ Stanley Schacter, "Birth Order, Eminence and Higher Education," American Sociological Review, 28(1963), pp. 757-767.

³⁶ Carmi Schooler, "Birth Order and Schizophrenia," Archives of Genetic Psychology, 4(1961), pp. 91-97

collected finding can be organized have not been successful.³⁷

Koch and others have attempted to explain their results through the notion of sibling rivalry and dethronement of the first child. Although some specific results can be explained in this way, no rationale is provided for the entire personality configuration. It is curious in this regard that first born children and only children exhibit much the same personality configuration. This is not explained by sibling rivalry.³⁸ Also, many results which would be predicted are not found. For example, sibling rivalry theory would lead to the prediction that older siblings would score higher in content-free anxiety tests. This is not borne out by the data.³⁹ It would also be expected in terms of sibling rivalry that siblings would express a desire to change places with one another and that they would report differences in parental treatment. Koch did not find this to be true. In interviews with her subjects she found that a small number of younger

³⁷ C. Schooler and S.W. Raynsford, "Affiliation Among Chronic Schizophrenic's: Relation to Intrapersonal and Background Factors," Journal of Personality, 2(1962), pp. 178-202; I.S. Wile and A.B. Jones, "Ordinal Position and the Behavior Disorders of Young Children," Journal of Genetic Psychology, 51(1937), pp. 61-63; I.E. Bennett, Delinquent and Neurotic Children (New York: Basic Books, 1960).

³⁸ Schacter, "Birth Order..."; P. Sears, op. cit.; R. Sears, op. cit.

³⁹ See footnote 16.

siblings said they would like to be like a same-sex older sibling, but then only a small percent of children wished to change places and almost no children cited differences in treatment by parents as a reason for wishing to change.⁴⁰

Another idea which has been developed somewhat is that child rearing practices differ for first and later children. This has been treated most fully by Robert Sears. He hypothesized that parents would be more permissive and less demanding with later children. His research results were weakly positive. However, he does not show how this phenomenon results in all the generally observed differences between siblings.⁴¹ Further investigation was done by MacArthur, who found that while differences in child rearing practices were reported in some families, the children in these families did not exhibit greater differences in personality with respect to birth order than the children of parents who reported no differences in child-rearing.⁴²

The preceding review of the literature was intended to show the utility of this theoretical scheme for organizing the research findings of sibling research. The research literature on siblings is incomplete; it does not approach satisfactory

⁴⁰ Koch, "Certain Formal Attributes....," op. cit.

⁴¹ R. Sears, op. cit.

⁴² MacArthur, op. cit.

treatment of all desirable areas, nor has it come close to treating the full range of variables which could be related to birth order. However, in general, the existing research results are highly consistent with this theory.

CHAPTER IV

The Research Design

A design was at length reached which would have three primary objectives:

1. To test the major theorem, Theorem I, that the presence of older siblings facilitates socialization to peer roles.
2. To ascertain that the State Descriptions, do in fact hold, that is, that sources of peer interaction role models are limited in urban society, but are more plentiful in a rural environment.
3. To provide evidence bearing directly upon the propositions 3 and 5, that older siblings and their peers are peer socializers and that interaction models provide a means by which socialization to peer roles occurs.

Due to the practical limits placed upon the size of the research undertaking, no provision was made for the testing of Theorems 2 and 3, which related to sex differences. The size of the sample to be drawn was so small that no meaningful data on variations by sex could have been accumulated.

A design was conceived involving successive observations of ten children within the school setting. A schedule was prepared upon which the children, five younger and five oldest

siblings, were evaluated as they played in spontaneous groupings and as they interacted during free time within the classroom. A home interview was also prepared in which the parents were asked to describe first, the peer group behavior of their children, and second, the family activities which might produce models of peer interaction.

The ten children selected as subjects all came from lower middle income suburban living situations. The families all included both parents. The fathers were all employed outside the home in semi-skilled to white collar work. All families lived in one family dwellings in clearly residential areas. Later, after the study was under way, four rural children were added to the study for comparative purposes. The fathers of these children were all full time farmers.

Arrangements were made in such a way that the investigator was unaware of the ordinal position of the subjects for the duration of the observation period; the teacher selected the subjects as directed and withheld birth order from the observer. There was some difficulty in controlling the sex distribution of the sample because of the small size. There were three males and two females in the sample of older urban children, while there were three females and two males in the sample of younger urban children. Among the rural children, there was one male and one female of each ordinal position.

The Observational Study

The following areas were delineated for organization of the observational material. The reasoning follows from the definition of socialization advanced in Chapter II.

- I. Group Behavior--the properties of groups in which the subject elected to participate and in which he demonstrated success.
 - A. Sex composition of elected group--same sex as subject, or mixed sex. (Election of peer groups of mixed sex was considered evidence of advanced socialization to peer roles.)
 - B. Size of elected group--(Election of small groups was considered evidence of advanced socialization to peer roles.)
 - C. Stability of group choice--(Tendency to remain in the same group over longer periods was considered more advanced peer group behavior.)
 - D. Role differentiation within elected group--(Election of groups in which there were a number of ongoing roles was considered evidence of more advanced socialization to peer roles than election of groups in which members are all playing essentially the same role.)
- II. Personality Dimensions (Strength in the following personality dimensions was considered to indicate advanced socialization to peer roles.)
 - A. Peer orientation--the seeking of attention, acceptance, and companionship of peers rather than superordinates or subordinates.
 - B. Extroversion--the propensity to initiate peer interaction, to take active roles in peer group activities, and to join new groups easily.

From this outline of measurable aspects of peer role socialization, a set of specific questions was drafted.

For questions 1 through 4 a specific answer was sought for

each group in which the child was seen playing.

1. What is the sex composition of the group?
2. What is the exact size of the group?
3. Does the group size shift without disrupting the activity, or is there a specific number which cannot change without disrupting the activity?
4. How many different roles are being played within the group?

The remaining questions were answered during each observation period.

5. How many times did the subject shift groups during the period?
6. How many times does the child call upon an adult for approval?
7. How many times does the child call upon an adult for help?
8. Does the subject assume an active part in the conversation and activities of his group? Describe.
9. How many times does the child ask another to join a group?
10. How many times does the child join an ongoing group on his own initiative?

After each of these questions had been answered specifically, narrative comments were added concerning the observed behavior of the subject which related to the question. A schedule was completed for each child during each observation.

The observations were set up in such a way that each child was observed for six half days, three mornings and three afternoons; the children were observed three at a time. The groups of three were selected so that each child appeared with all of the others during two observation periods. It

should be emphasized that in no way were the children being observed together in a given period treated as a group; they were all free to operate independently within the entire class. The care taken to see that each appeared with all others in an observational unit was an effort to keep comparisons between particular individuals from distorting the evaluations. This arrangement provided that each child be compared with all others for the same amount of observation time.

An effort was made wherever possible to record a quantitative answer. The exact scoring used in analysis will be discussed explicitly in Chapter 5. For the present, let us simply state the research hypothesis which is drawn from each question.

Hypothesis 1: Younger siblings will be more often found in cross-sex groups than will older siblings.

Hypothesis 2: The average size of the groups chosen by younger siblings will be smaller than the average size of the groups chosen by older siblings.

Hypothesis 3: The average number of roles played within groups chosen by younger siblings will be higher than the average number of those chosen by older siblings.

Hypothesis 4: Younger siblings will make fewer shifts between groups than older siblings.

Hypothesis 5: Younger siblings will make fewer claims on adults for approval than will older siblings.

Hypothesis 6: Younger siblings will make fewer claims on adults for assistance than will older siblings.

Hypothesis 7: Younger siblings will be more active participants in their peer groups than will older siblings.

Hypothesis 8: Younger siblings will make more invitations to others than will older siblings.

Hypothesis 9: Younger siblings will join an ongoing group more often than will older siblings.

Each of these hypotheses, 1 through 9, provides a test of Theorem I.

As was mentioned earlier, the observer was unaware during the ten days of observation which five children were older siblings and which five were younger. It must be admitted, however, that during their interaction with the observer the children did give some clues to the age of their siblings. They talked about their siblings frequently and the activities they described sometimes suggested the sibling order. In only one case was the observer conscious of being certain of the ordinal position of the child; one girl, Elizabeth, referred constantly to her "big brother".

Prior to the observation of the sample children, the research design was pretested on ten other children who were also selected by the teacher, but with the difference that these were to be children who would ultimately not be suited to the sample for socio-economic, or family structural reasons. When it was decided to get some information on rural children, there were found to be four rural children in this group who had an intact family, whose fathers were full time farmers, and on whom a complete set of observations existed. These four children were then included in the study. The plan under

which the observations were made was identical to the one used for the ten sample children. The motivation for including them was related to the second objective of this design: it was conjectured that if the rural family structure is different, specifically, if the father is not removed from the daytime environment of the child, and if he and the mother both, in fact, do interact with their own peers around the children, then, by Proposition 6 of Chapter II we might expect that sibling order would not be as important a variable in predicting the behavior of rural children. Thus we have the following working hypothesis:

Hypothesis 10: Children of families who exhibit a rural living pattern will not demonstrate as strong a relationship between peer role socialization variables and ordinal position as will children of families whose living pattern is urban or suburban.

This hypothesis is a test of Theorem 4.

The Home Interview

The home interview was designed to aid in the attainment of each of the objectives stated on page 38. Items 1 through 5 are intended to augment the observational data testing Theorem I. Item 6 is directed at establishing the existence of the conditions stated in the relevant State Description. Items 6 and 7 together are intended to provide evidence dealing directly with the Propositions 3 and 5. The entire interview schedule follows.

In this study I am trying to discover whether or not there are differences in the behavior of children which are related to their position in the family. By position in the family I mean age relative to the age of brothers and sisters. Children with older brothers or sisters might be expected to act differently than those with younger. I wonder if you would help me do this by telling me about _____.

1. First, can you tell me something about your child's playmates? Does he have several different ones with whom he alternates or does he have a few special ones? About how many would you say there are? How many of them play together at any one time? Is there some sort of permanent play group? About how old are his playmates compared to him?
2. When your child comes home from school and on Saturdays what does he usually do? Does he generally go off somewhere with his friends or stay close by? Do you think he likes to do things by himself? Does he spend much of his free time with you, other members of the family or friends?
3. When your child is with his playmates how would you say that he compares with his brother or sister on how active or enthusiastic a part he takes in a group? Could you compare your children also on the amount of times they invite others to join their playgroup and on the number of times they willingly go out and find playmates?
4. Children seem to differ somewhat on whose opinion has the most effect on their behavior. When your child does something, whose approval do you think he is most interested in? (your's, his brother's or sister's, his friends', some other adult's) Can you give me any examples of his behavior that have made you conclude this? Perhaps I should also ask whose disapproval makes him the most unhappy? Can you recall any situation which would illustrate this?
5. How do you think your children compare on friendliness to other children whom they might not know well? Is there anything in particular that has made you think this; can you give me any examples? Which of your children do you feel is the most independent? In what way are they independent? Can you recall some situations that illustrate their independence?

Now I would like to find out a few things about the activities of your family so that we can see what effect they might have on the differences in your children.

6. About how often do you entertain other adults when your children are around? When you do entertain, to what extent are the children in on the activity? That is, for example, when you have people over for dinner do the children eat with you? Are there other adults such as aunts and uncles who are frequently around the house on the week ends or at other times when the children are present? Can you recall some situations in your home when the children might have had the chance to see you socializing with other adults?

7. Does your older child bring friends home to play after school or on the week ends? If he does, does your younger child ever spend time with them? About how much? Does the younger seem to take much interest in what the older one and his friends are doing? What would you say usually happens when the younger one is around? Does the older group include him? Do they let him play on certain conditions, at some times but not others? Can you describe a situation that you recall which might illustrate what happens.

The specific Hypotheses extracted from the interview format sometimes require the combination of data from two or more questions; as independent qualitative evaluations were necessary in order to scale these items, the procedure will be discussed in Chapter 5. The hypotheses listed here do not include each item on the interview; it was found that some items were best suited to a descriptive discussion. The hypotheses we can state are the following:

Hypothesis 11: Younger siblings will have a more stable play group than will older siblings.

Hypothesis 12: Younger siblings will choose to play with peers more often than will older siblings.

Hypothesis 13: Younger siblings will be higher in peer orientation (as measured by valuation of opinion of peers vs. adults in item 4) than will older siblings.

Hypothesis 14: Younger siblings will be evaluated more highly on peer friendliness than will older siblings.

Hypothesis 15: Younger siblings will be evaluated as more independent than older siblings.

Hypothesis 16: Urban and suburban families in which the father works away from the home will report fewer situations in which the parents might provide models of peer interaction than will rural families in which the father works at home.

Hypothesis 11 through 14 provide further tests of Theorem

1. Hypothesis 15 is designed to provide evidence upon the accuracy of the State Descriptions as advanced in Chapter 2. The final hypothesis, Hypothesis 16 is a test of Propositions 3 and 5. Interview item 6, from which Hypothesis 17 is drawn, also provided illustrative material on the manner in which older siblings function as peer socializers.

CHAPTER V

Analysis of Results

The Observational Study

As the observational study began it became apparent that a great deal of informal interaction occurred within the first grade classroom during art periods and independent work times and while the teacher was involved with special reading groups. Thus the duration of the useful observation periods for personality dimension items extended over almost the entire half day school sessions. During each half day a thirty to forty minute recess provided an opportunity for the children to interact freely with their peers and to choose their own peer group activities. It was during these recesses only that data was gathered regarding the structure of elected play groups and the number of shifts made between play groups. Thus as we consider these first results, on play group structure, thirty to forty minutes can be considered the effective length of the observation period.

Observational data on urban children will be considered first. The first indicator of advanced socialization to peer roles was purported to be participation in peer groups of mixed sex composition. In scoring the data on this question the observer simply noted whether each group which the subject

elected was mixed or same sex. The results appear in

Table 1.¹

Table 1. The Average Number of Cross-sex Groups Chosen in Six Observation Periods			
Older Siblings		Younger Siblings	
Child No.	Cross-sex groups	Child No.	Cross-sex groups
1	.5	6	.5
2	1.0	7	.6
3	.3	8	1.0
4	.5	9	.4
5	.6	10	.3
Mean	.58	Mean	.56
p= .238			

Clearly there is no support to be found here for Hypothesis 1. In fact, it would appear that cross-sex groups were very uncommon among all of the children. There was some suggestion, at such times as gym period and the organized recreation period which followed lunch, that some children are more successful than others when placed in a cross-sex group. No systematic observation of this was made, however. Secondary evidence presented by Koch² and Brim³ would lead one to speculate that the most successful children would be those with cross-sex older siblings, but our sample was too

¹ In all tables of the Chapter the statistical text applied was the Median Test, in conjunction with Fisher's exact test of significance.

² Koch, "Some Personality Correlates..." op. cit.

³ Orville Brim, op. cit.

small to partition by sex.

The average group size chosen by children was more variable. In scoring this item the number of children in each group which the subject elected was recorded. This produced up to three numbers for one observation period for some subjects as children changed groups as many as 3 times. The group size numbers for each observation were, therefore, averaged and then an average of the six observation period averages was taken. In Table 2, below, we can see that the results favor the Hypothesis 2 ($p = .004$), that is, younger siblings did in fact choose consistently smaller groups than did older siblings.

Table 2: The Average Group Size of the Groups Elected by Younger and Older Siblings, Averaged Over Six Observation Periods.

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child No.</u>	<u>Group Size</u>	<u>Child No.</u>	<u>Group Size</u>
1	6.64	6	6.00
2	6.16	7	5.00
3	8.50	8	4.25
4	7.66	9	4.41
5	7.16	10	4.41
Mean	7.22	Mean	4.82
P = .00397			

Table 3: The Average Number of Roles Played within Groups
Elected by Older and Younger Siblings

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child No.</u>	<u>Number of Roles</u>	<u>Child No.</u>	<u>Number of Roles</u>
1	2.0	6	2.8
2	2.1	7	2.1
3	1.5	8	2.7
4	1.9	9	2.5
5	2.0	10	2.7
Mean	1.9	Mean	2.56
P = .00397			

The averages recorded in Table 3 were computed in the same manner as those in Table 2. Scores for the item represented in Table 3 were obtained by counting the number of identifiable roles being played in each group that a subject elected. A discrete role was said to exist when a function relevant to the group activity was identified which could only be fulfilled by a particular player, or kind of player. For example, in a game of tag, only two real roles are in operation, "it" and those who are trying not to be tagged, whereas in a game of basketball, there are at least five distinct roles. A sort of mock basketball game was very popular with a few of the first grade boys. This game had elements of make-believe, in that each boy represented a "real athlete." There was, however, real ball playing going on as they pretended, and it was very clear that both as make believe individual stars and as players each boy had a unique identity and a unique function in the game. A favorite multi-role game of the girls was, of course, to

"play house." Another activity which developed during the course of the observations was the planning of a play. This was an ongoing project which initiated the meeting of the same group of girls for several recesses. They planned costumes, programs, parts, etc., each one assuming special tasks and responsibilities. In contrast, a popular game with some of the children is a form of bombardment or dodgeball in which every man is for himself (no teams) and the ball is always up "for grabs." The only rule is that when you are hit you are out and the last man wins. Some other popular games being played at the time which involved only minimal role differentiation were rolling in the snow, throwing snowballs and playing statues (one child swings the others around and when he lets go, they fall into poses which are then judged as to quality by the teacher).

The next item of concern is the stability of the child within a group. This was measured by counting the number of times a subject changed groups within a given observation period. The results are seen in Table 4. Again the hypothesis, Hypothesis 4, is supported ($p .004$).

Table 4: The Average Number of Changes in Group Choice Made During One Observation Period

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child No.</u>	<u>Number of Changes</u>	<u>Child No.</u>	<u>Number of Changes</u>
1	1.16	6	.33
2	.83	7	.33
3	.66	8	.16
4	1.00	9	.33
5	1.00	10	.16
Mean	.77	Mean	.22
$p = .00397$			

The following data can be considered as indicative of peer orientation; a low average number of claims made upon adults will be interpreted as evidence of high peer orientation. For both Table 5, "Claims Made upon Adults for Approval", and Table 6, "Claims Made upon Adults for Assistance", scores were computed by recording the number of times the child was observed to make such a claim during an entire morning or afternoon. A claim for approval was considered to have been made only when the subject approached the teacher directly and asked her to look at his work, watch him do something or listen to him repeat some experience, and when he was satisfied with a general approval response such as "That's very nice." (He was considered to be satisfied if he retreated willingly after the response was made and resumed his activities.) Similarly, a claim for assistance was considered to have been made if a subject approached the teacher directly and asked her to help him with his work, or activity, or to take his part in a disagreement with other children, and if he did not appear satisfied, until she made some concrete effort to resolve his difficulty. The resulting tables would indicate that older siblings do in fact make significantly more such claims upon adults and that younger siblings can, therefore, be considered higher in peer orientation.

Table 5: The Average Number of Claims Made Upon an Adult for Approval During One Observation Period

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Claims</u>	<u>Child</u>	<u>Claims</u>
1	2.83	6	1.0
2	1.0	7	.5
3	1.83	8	.33
4	2.16	9	.66
5	1.83	10	.33
Mean	1.99	Mean	.38
p = .022			

Table 6: The Average Number of Claims Made Upon Adults for Assistance During One Observation Period

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Claims</u>	<u>Child</u>	<u>Claims</u>
1	2.16	6	.83
2	.83	7	.50
3	2.16	8	.66
4	1.00	9	.33
5	1.16	10	.83
Mean	1.46	Mean	.63
p = .022			

Hypotheses 5 and 6 are thus strongly supported by the above data.

The evaluation of data on participation in peer groups with respect to Hypothesis 7 was a more difficult matter as no unequivocal means of quantification was available. Subjects were rated independently, by the investigator and one other reader, i.e., an independent judge. Data were gained from the narrative comments on question 8 and from the general narrative on each child. The subjects were classed as high, medium, or low in peer group participation. The results appear in the

following table, Table 7.

Table 7: Peer Group Participation			
High = 3		Medium = 2	Low = 1
<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Participation</u>	<u>Child</u>	<u>Participation</u>
1	2	6	2
2	2	7	3
3	1	8	3
4	1	9	2
5	2	10	3
Mean	1.6	Mean	2.6
p = .22			

In scoring the responses for the above item, such points as volunteering to be "it" in order to keep the game going, contribution of ideas to the activity, high level of conversation, bringing attention to the good work of others were considered evidence of high interaction. The responses considered were those descriptive statements, made in conjunction with question 8. In preparing answers to question 8 the observer tried to record an account of any activity in which the child engaged which might be at all relevant. The results are in the direction of Hypothesis 7, although they do not reach significance.

During the observation period it was found that children in general made few invitations to others. The maximum number made in one period was two; it was usually phrased in such a way as to include two or three regular companions and to establish a play group which would last through much

of the observation. Thus one invitation might serve several children for a fairly long period. A common invitational form was "Come on, you guys, lets go out on the playground." Activities could then develop within the context of the group. This initial invitation might then be extended by including another person if more were needed for the game chosen or by making a further more specific suggestion as to what the group might do. Thus it was difficult to count discrete invitations. This experience led the observer to score this item, question 9, by recording whether the subject "ever" made an invitation during the observation period. The results are seen in Table 8; they are in the direction of Hypothesis 8, that younger siblings will make more invitations to others than will older siblings, but are not significant.

The scoring for question 10, regarding the propensity of a child to join an ongoing group was handled in the same way. The reasoning which prompted the use of this procedure was similar to that used regarding question 9. Explicit moves to join an ongoing group were made so seldom that recording whether a child ever made such an advance seemed more functional. Table 9 below indicates that Hypothesis 9, younger siblings will join an ongoing group more often than older siblings, is not supported at a significant level, although findings are in the predicted direction. Both of the behavior variables treated in Hypotheses 8 and 9 can be seen as indicators of extroversion in the peer group. Thus, from the data it is

suggested that younger siblings do appear to be more extroverted with peers.

Table 8: The Number of Times a Child was Observed to Make an Invitation During 6 Observation Periods

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>
1	3	6	5
2	4	7	4
3	0	8	4
4	1	9	3
5	2	10	3
Mean	2	Mean	3.8
p = .145			

Table 9: The Number of Times a Child was Observed to Join an Ongoing Group During 6 Observation Periods

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>
1	2	6	4
2	3	7	4
3	0	8	3
4	1	9	2
5	2	10	3
Mean	1.6	Mean	3.2
p = .065			

Table 9 concludes that data gathered through the observational technique, from which we have accumulated evidence on the nine hypotheses relating to Theorem I. Of these nine Hypotheses six are supported by the evidence, and three are not supported. Of these three, the results for two were in the direction predicted, but not at a significant level.

The remaining data gathered by observation was that done

on the four rural children. It is difficult to say anything meaningful about a sample of four. It would have been desirable to obtain a sample of the same size as the suburban sample, but this proved a difficult task without entering another school or age level. It seems that the number of families which maintain a rural life style is limited even in a community with a relatively large farm population such as the one in which the study was done. On examining the records of the children it became apparent that most farmers hold a factory job in addition to maintaining the farm. At any rate, the data is presented in the following set of tables, Tables 10 through 18.

Table 10: The Average Number of Cross-sex Groups Chosen in Six Observation Periods for Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
Child	Group Size	Child	Group Size
1	.5	3	.6
2	1.0	4	.4

Table 11: The Average Group Size of the Groups Elected by Younger and Older Siblings, Averaged Over Six Observation Periods for Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>
1	5.0	3	4.41
2	4.25	4	5.0

Table 12: The Average Number of Roles Played Within Groups
Elected by Older and Younger Siblings For Rural
Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Number of Roles</u>	<u>Child</u>	<u>Number of Roles</u>
1	2.7	3	2.0
2	2.1	4	1.8

Table 13: The Average Number of Changes in Group Choice Made
During One Observation Period For Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Number of Changes</u>	<u>Child</u>	<u>Number of Changes</u>
1	.33	3	1.0
2	1.0	4	.66

Table 14: The Average Number of Claims Made Upon an Adult for
Approval During One Observation Period for Rural
Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Claims</u>	<u>Child</u>	<u>Claims</u>
1	4	3	3
2	3	4	2

Table 15: The Average Number of Claims Made Upon Adults For
Assistance During One Observation Period for Rural
Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Claims</u>	<u>Child</u>	<u>Claims</u>
1	.83	3	1.0
2	.66	4	1.16

Table 16: Peer Group Participation for Rural Children

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Participation</u>	<u>Child</u>	<u>Participation</u>		
1	3	3	2		
2	2	4	3		

Table 17: The Number of Times a Child was Observed to Make an Invitation During 6 Observation Periods For Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>
1	4	3	3
2	3	4	2

Table 18: The Number of Times a Child was Observed to Join an Ongoing Group During 6 Observation Periods for Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>
1	4	3	3
2	3	4	3

As is obvious, no particular relationships can be observed between the variables and ordinal position. However, with a sample of four, this can hardly be said to be clearly supportive. All that can be said is that Hypothesis 10, that rural children will not show as strong a relationship between peer role socialization variables and ordinal position as urban or suburban children, is not rejected. Some definitive research on this hypothesis is suggested.

The Interview

The questions on the interview were constructed and answered in such a way that evaluation required the use of independent judgements. The investigator and one other reader served as judges. Each response was ranked independently and then the rankings were compared. Where disagreement occurred the judges discussed the cues which had led to their ranking decisions in an effort to reach a consensus. As most questions were ranked high, medium, and low, it was decided in cases of disagreement to assign the medium rank.

The primary sample of urban children will again be treated first. The first group of items to be analyzed, items 1 through 5 relate again to Theorem I. Item 1, which was composed of questions examining the stability of the play group did not yield differentiated responses. The questions were scored separately and as a group, but neither method produced any qualitative differentiation, as Table 19 indicates. The interviewing experience suggested that this was at least in part due to the real limits of children within certain age boundaries in one neighborhood. The community in which the research was done was of a small enough size so that only a few suburban areas existed. Within these the age concentration in age of residents is not as great as in the suburbs of a large city. Thus there were found to be only a few children in any one neighborhood at any one age level.

Table 19: The Stability of The Neighborhood Play Group

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Stability</u>	<u>Child</u>	<u>Stability</u>		
1	3	6	3		
2	3	7	3		
3	3	8	3		
4	3	9	3		
5	3	10	3		
Mean	3	Mean	3		

Item 2, testing Hypothesis 12, that younger siblings will more often choose to play with peers than will older siblings, did not show differentiation in responses. The results appear in Table 20 below; they do not support the hypothesis at all. One older sibling, Allen, who appears in the tables as number 3, presents somewhat of a special case. His older cousin is a next door neighbor. He is quite dependent upon this cousin and elects him when possible over his peers. When the cousin is unavailable Allen then plays with other neighborhood

Table 20: The Number of Times a Child Chooses to Play With Peers

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Number</u>	<u>Child</u>	<u>Number</u>
1	3	6	3
2	3	7	3
3	2	8	3
4	3	9	3
5	3	10	3
Mean	2.8	Mean	3

children.

The foregoing can be considered to be one measure of peer orientation. Another, more direct measure of peer orientation is found in item 4. Hypothesis 13 predicts that younger siblings will be higher in peer orientation as measured by their valuation of adult opinions as compared to the opinions of peers. Table 21 below indicates that this hypothesis was supported ($p = .02$).

Table 21: Peer Orientation of Subjects

High = 3		Medium = 2		Low = 1	
Older Siblings		Younger Siblings			
Child	Group Size	Child	Group Size		
1	1	6	3		
2	2	7	3		
3	1	8	2		
4	1	9	3		
5	1	10	3		
Mean	1.2	Mean	2.8		

Some of the responses to this item illustrated the predicted difference particularly well. In five of the ten urban home interviews, answers were somewhat explosive. Parents expressed the belief that they did not have as much control over their second children as they had over the first. Some typical remarks were "he doesn't care about us like the oldest one does," and "if he (second child) wants to do something, nothing we say makes any difference." They often continued to explain, "it's not that he is disobedient; he minds, but he sides with his friends or his brother and doesn't hesitate

to say so," or "he isn't bad, but it doesn't bother him if we're upset like it does the older one; he's more interested in what his friends think than us," From these responses, it can be concluded that younger siblings are more peer oriented than older siblings on this measure.

Urban parents also saw their younger children as friendlier, or more extroverted, with peers than older children. In rating children on this dimension, information was taken from the responses to both items 3 and 6. The data that appear in Table 22 give significant support ($p = .02$) of Hypothesis 14.

Table 22: Friendliness to Peers

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>		
1	1	6	3		
2	2	7	3		
3	1	8	3		
4	1	9	2		
5	1	10	3		
Mean	1.2	Mean	2.8		
p = .02					

Such considerations as the following were taken into account when rating the children on friendliness to peers, or extroversion. Younger siblings were consistently described by parents as fitting more easily into new groups than their older brothers and sisters. One parent recalled, "when we took Mark (older sibling) to Sunday School for the first

time he cried for us the whole time. The year was half over before he knew the other children well enough to go right in and start playing. But when Jeff (younger sibling) went, he took off the minute he was out of his coat and that was the last we saw of him until after church when he came running out with three other little boys showing us what they had made." Another parent said, "We can take Elizabeth anywhere visiting and she finds somebody to play with right away, but Mike (older sibling) will stay with us until we go out with him and help him find someone and get them started doing something. It's always been that way."

Another criterion of peer friendliness was taken from item 3. It was found that younger siblings were generally more willing to go out and find their friends than were older siblings. A typical response was, "Peggy (younger sibling) gets home from school, and if no one comes over she calls someone up or goes out; she never asks me who she can play with. All I get is an announcement of where she is off to. But Judy (older sibling) comes in and wants to know who she can play with. I have to think of children and push her to call. She likes to play with other children and feels left out if they don't ask her." A mother of two boys made some similar comments: "I don't know what I will do with Jerry (older sibling) when he gets older, if he doesn't change. He is unhappy if the other kids don't come over, but he won't go over to their houses, and ask to play. Now, I go out with

him, or call their mothers, but I can't do that forever. Mike (younger sibling) has never been like that from the time he was big enough to go out by himself. I never have to worry about playmates for him; he has always just gone ahead and found them on his own."

The concluding hypothesis testing Theorem I is Hypothesis 15, younger siblings will be evaluated as more independent than older siblings. The findings in Table 23 are in the direction predicted, but do not approach significance. This item proved the most difficult to evaluate as the implication of independence was not at all clear. Many parents evaluated their older siblings as independent because they chose to do things alone and because they enjoyed assuming responsibility around the house. Other parents evaluated younger siblings as independent because they rarely came home crying, asked for help, or asked their parents to entertain them. It was up to the judges to discriminate on the basis of incidents the parents recalled for the interviewer, as to what behavior constituted independence. It appears that in the context of the home independence is too general a term on which to predict sibling differences.

Table 23: Independence of Subjects

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>				<u>Younger Siblings</u>	
Child	Group Size	Child	Group Size	Child	Group Size
1	2	6	3		
2	3	7	3		
3	1	8	2		
4	1	9	2		
5	2	10	3		
Mean	1.8	Mean	2.6		

A similar analysis was done of the rural home interviews with respect to Hypothesis 11 through 15. The expectation was, in line with Theorem 4, that each hypothesis as stated would be rejected for rural children. The complete set of tables follow. However, as discussed in the results of the observational study, the total numbers are not sufficient to show any clear results. No relationship between sibling order and the variables can be seen in the results, but this suggests only that the study might be replicated with sufficient numbers at a later time.

Table 24: The Stability of the Neighborhood Play Group

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>				<u>Younger Siblings</u>	
<u>Child</u>	<u>Stability</u>	<u>Child</u>	<u>Stability</u>	<u>Child</u>	<u>Stability</u>
1	3	3	3		
2	3	4	3		

Table 25: The Number of Times a Child Chooses to Play With Peers, for Rural Children

<u>Older Siblings</u>		<u>Younger Siblings</u>	
<u>Child</u>	<u>Number</u>	<u>Child</u>	<u>Number</u>
1	3	3	3
2	2	4	3

Table 26: Peer Orientation of Rural Subjects

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>		
1	3	3	2		
2	2	4	2		

Table 27: Friendliness to Peers for Rural Children

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>		
1	2	3	3		
2	3	4	2		

Table 28: Independence of Rural Subjects

High = 3		Medium = 2		Low = 1	
<u>Older Siblings</u>		<u>Younger Siblings</u>			
<u>Child</u>	<u>Group Size</u>	<u>Child</u>	<u>Group Size</u>		
1	3	3	3		
2	2	4	3		

Hypothesis 16, that urban and suburban families will report fewer situations in which the parents might provide models of peer interaction than will rural families is born

out by a comparison of the interview schedules. It is believed that it would be valuable to review the narrative accounts given in response to item 6 as they do provide considerable insight into the differences in life styles between rural and urban families. In general they do lend support to the State Descriptions developed in Chapter II.

All ten urban families interviewed reported the frequent use of babysitters while none of the four rural families could recall having ever hired a babysitter. Rural parents explained that while children were still infants they were occasionally left with grandparents or other close relatives, but after infancy they were generally taken along on evening outings.

In seven of the ten urban families children were fed separately when dinner guests were expected unless the guests were grandparents, in which case a peer interaction situation would not exist anyway. The remaining three families reported that the children did eat with them when guests were present, but that they rarely had guests other than relatives for dinner. All three families estimated that they had entertained non-related dinner guests less than five times in the past year. Rural families reported that children always ate with them when they had company. Although a large share of their dinner company was reported to be related, all four could recall ten or more times within the past year in which they had served

dinner to non-related guests. It was also true that among relatives, a large amount of interaction was with the families of siblings and cousins who all lived close by, whereas the interaction with relatives in urban families was primarily intergenerational.

In only two of the urban families could subjects recall any instance in which the father participated in a male peer activity in front of his children. One instance was a trip to a baseball game in Detroit on which the father and some friends took their sons. Another was the building of a neighborhood swimming pool by the men which afforded the boys a chance to "hang around." Other families suggested that there were family reunions and picnics at which this might occur. However, all agreed that it was an unusual event. All four rural families reported frequent events when such interaction might be visible. The men exchanged work all during the harvest season so that they would be working in groups while the children played around them, or helped. Three of the men stated that they often went rabbit hunting or trapping raccoons together on their own farms during the winter and that the children would tag along. All of the families belonged to the Grange which provided monthly adult social gatherings in the evening. The children were customarily brought along to these meetings and left to play around until they got sleepy.

From the foregoing, it is apparent that evidence exists

for the patterns suggested in Chapter II. Several opportunities for rural children to watch their parents interact with peers can be seen in the accounts given, while only minimal opportunities appear to be available to urban children.

It now remains only to examine the information gained in item 7 which relates to Hypothesis 17, that all families will report frequent situations in which the older sibling might provide models of peer interaction.

All fourteen families interviewed reported that younger siblings were within sight of older siblings as the older siblings played with their peers as often as daily, and no less than several times weekly. Thus we can consider this final hypothesis supported; concomitantly, this hypothesis provides direct evidence upon Proposition 3.

A detailed review of the accounts given in response to item 7, reveals further support for the theoretical scheme as developed in Chapter II. It appears from the descriptions given by parents of their children's behavior, that the functioning of peer interaction models, as proposed in Proposition 5 is structurally possible.

All parents interviewed stated that their younger children liked to "hang around" their older brothers' and sisters' play groups. This was for some a source of trouble, as the older child did not always appreciate the presence of a younger sibling. However, all of the parents said that most of the time the children handled the situation themselves.

One bargain often reached, according to some subjects, was, that the younger one would be allowed to stay for a limited amount of time if he would not get in the way and would promise to leave when told. When asked to recall some specific situations, one mother told this story:

Mike was watching Jerry and his friends play monopoly yesterday and pointed out that Jerry had made a mistake. Jerry socked Mike and told him to leave. Mike didn't cry to the admiration of the other boys. (They commented to Jerry that his little brother could "take it" and Jerry responded by saying, "he's O.K., I guess.") Mike then asked if he could stay if he did what they told him. There were murmurs of "let him stay" and "he's not hurting anything." Finally Mike was told he could stay and be the banker if he would promise to shut up. The next game they let him play and then told him to go find somebody else to play with, which he did.

Other stories were much the same. Mothers reported that their younger children were able to participate in organized games such as Monopoly without special help and without spoiling the game much earlier than their first children had been able to do so. They also stated that the younger children were able to take treatment such as the sock in the arm mentioned above without leaving the group at an earlier age than could their first children.

In the interview study it was found that the data on urban children is generally supportive to two of the hypotheses tested regarding Theorem I. No significant relationship was found on the other three hypotheses testing this Theorem, although findings were weakly in the predicted direction on one. Data on rural children was too meagre to warrant any

conclusions with respect to the five hypotheses cited above.

In comparing urban and rural home interviews on the living patterns of the families, support was found for both Hypotheses 16 and 17. In general, the results of the home interview were favorable to the theory.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The motivation for undertaking a study of siblings was developed in Chapter I of this paper; the area of consideration for the present study was stated to be the effect of the sibling relationship upon socialization. Out of this motivation and some of the theoretical literature on socialization a theory was developed which provides a framework for understanding relationships between ordinal position and socialization to peer roles.

Making one assumption, a set of six propositions were developed. From these propositions three basic theorems were derived under the conditions of a specific state description (that of modern, urban industrial society). Under the conditions of an alternate state description (rural society), a fourth theorem was derived. With this theoretical development it was possible to view the sibling relationship functionally in terms of early socialization. This theory was shown to provide a basis for understanding and organizing existing research literature on siblings.

A research design was explicated to test a minimum set of the theorems generated from the theory and to provide direct support for the set of propositions. The basic design was an observational study of ten urban first grade children in the school setting; the observations were blind, in that

the observer was unaware of the ordinal position of the subjects until the completion of the observations. A second aspect was an observation of four rural children in the same setting for comparative purposes. A third aspect of the design was a home interview which was designed to augment the observational measures of socialization, to lend support to the propositions, and to add credence to the state descriptions posed in Chapter II.

In the design a total of sixteen research hypotheses were detailed, thirteen of which were measures of Theorem 2, one of Theorem 4, one of propositions 3 and 5, and one of the comparative state descriptions.

The strongest support was found for Theorem 1. Although the sample size was small, just ten, data on a total of thirteen hypotheses were collected. Several of these hypotheses were supported at a significant level; on three more, results favored the hypothesis, but not at a significant level; the remaining three revealed no relationship at all between the variable and birth order. (Of the last three, one measure was in part rendered ineffective by demographic limitations.) It might be noted, that in no case was a relationship contrary to the hypothesis found, even at a low level of significance.

As the sample of rural children was only four, data for Theorem 4 cannot be meaningfully interpreted, other than to note that the rural children seem to score somewhere in the middle or above on measures of socialization to peer roles.

The home interview comparisons revealed some distinct contrasts in the life styles of rural and urban families. In the families interviewed, rural families reported more conditions under which parents might provide models of peer interaction than did urban parents. In general, the responses were consistent with the intuitive picture developed in the state descriptions of Chapter II.

The home interviews also added credibility to Propositions 3 and 5. It was apparent in families interviewed that siblings were often found in situations which might serve the socializing function suggested in the theory.

It would have been desirable to include in the design test of Theorems 2 and 3. It would further have been desirable to draw out for testing some additional theorems which could be derived from the propositions. Either procedure would have added considerable weight to the theoretical scheme. However, limited resources for the research undertaking prevented this.

In the study which was executed there were many weaknesses: the primary ones were problems of numbers. The sample of ten urban children was not of sufficient size to justify any firm conclusions. The comparative sample of four rural children was much too small even to suggest any patterns in the findings; the comparative sample should at least have been equal in size to the urban sample. Each sample, urban and rural, should ideally have been large enough to permit breakdowns by sex.

However, a larger sample than the one used could not have been found in one classroom; the observer used all of the children with suitable family structures that there were in the classroom.

The strength of this study is believed to lie first in the wide range of measures applied to each subject. Although not a great number of the hypotheses reached significance in testing, they were quite generally in the direction predicted. Second, the fact that the observations were blind is believed to add greatly to the objectivity of measurement. Although results of a study this size cannot be called conclusive, the results are suggestive of the theoretical position taken.

It is believed that a more ambitious research project is warranted. Such a project would still demand an observational design similar to the one outlined in this study. The theory suggests that subjects should ideally be at the age when they first enter the peer group formally, that is in kindergarten or first grade. At such a young age, five or six years, an observational design is believed to be preferable to other types.

In this research, a theory of socialization of children by their siblings has been constructed. The theory is sufficiently general to organize a wide variety of research literature on the effects of birth order on socialization and personality. The secondary literature provides a great deal of evidence for

this theory; in addition, the study presented here provides further evidence for the conceptualization of the socialization process detailed in this theory. Certainly the theoretical structure has been shown to be viable and to suggest many directions for further research.

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