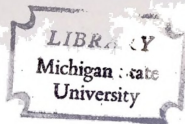


RELATIONSHIP OF FAMILY INTERACTION  
TO FAMILY ENVIRONMENT

Thesis for the Degree of Ph. D.  
MICHIGAN STATE UNIVERSITY  
ALICE J. DAVEY  
1971



This is to certify that the  
thesis entitled  
Relationship of Family Interaction  
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presented by

Alice J. Davey

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# ABSTRACT

## RELATIONSHIP OF FAMILY INTERACTION TO FAMILY ENVIRONMENT

By

Alice J. Davey

As families seek to improve the well-being of their membership, they set goals and exert energy to attain these goals. To help families with their decision-making, measures are needed to determine effectiveness of means used as well as the outcome of goal achievement. A task ascribed to the family by the larger society is the socialization and nurture of its members. In the management of this task, family members need to be together to interact.

This study is designed to investigate selected characteristics of the family environment and family interaction, defined as episodes of shared activity which involve two or more family members. Family environment includes the family members, the SES level of the family, the location and characteristics of the family dwelling.

A purposive sub-sample was selected from data derived from the Walker-Telling time use survey of 1296 husband-wife families in Syracuse, New York. The sample was composed of 126 families with one, two, and three children between the

ages of 6 and 11. Data were coded relative to the shared time of family members in five activity categories: social, eating, household work, physical and other care of family members, and management and record keeping.

A family interaction score was developed. The score was calculated by multiplying the number of people in each interaction episode by the number of minutes used for each activity. The products were then added together and divided by the total number in the family. The score was used to test the effects of specific characteristics on family interaction. Significant relationships between total family interaction scores and selected characteristics of the family environment were computed by analysis of variance and by Pearson's coefficient of correlation.

A significant relationship existed between the total family interaction scores and the activities categorized as social, eating, and care of family members. Slightly over 61 per cent of the interaction episodes were attributable to social activity. By contrast, 9.6 per cent of the interaction episodes involved household work. Eating and care of family members were inversely related to the total family interaction scores. That is, increases in the amount of time used in eating and care of family members resulted in decreased family interaction scores. A significant relationship also existed between the percentage of time

mothers shared with their children and family interaction. Family interaction increased as time shared by mothers and children increased. The fathers share of time was not significant which might raise questions about role modeling for the boys. It was further shown that there was a significant relationship between the total family interaction scores and school time, time of day, weekend days, and the school vacation season. As school time increased, the total family interaction scores decreased. Interaction in the evening also contributed to a decrease in the family interaction scores. Morning and afternoon interaction had the opposite effect. Weekend days and the school vacation season significantly contributed to an increase in the family interaction scores. The location of the family dwelling and selected characteristics of the family dwelling seemed to have no effect on the total family interaction scores.

The study provided a way to quantitatively assess family interaction and identified some of the factors which contributed to an increase or a decrease. Since interaction was more prevalent for social activities, further research is needed to more specifically determine the dimensions of social activity in the family setting. No measures were developed for quality in this study, research is also needed to determine factors which influence the quality of family interaction.



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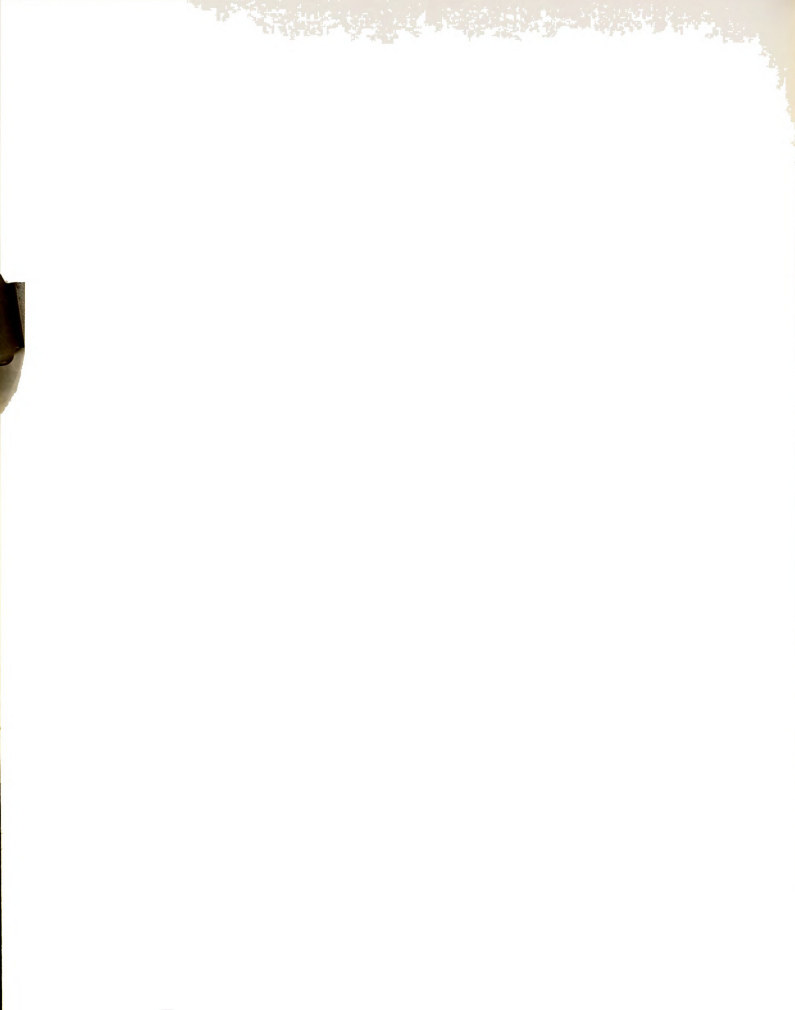
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## CHAPTER I

### INTRODUCTION

In home management, attention centers "on the totality of living in the family. . . . The management function evolves from the conscious direction of behavior toward predetermined family goals" (1:7). Professionals in the field of home economics "operate from the assumption that the primary goal of the family is the growth and development of individual members" (1:7). Thus the family <sup>x</sup> setting provides care and protection for its members as well as educating the child with regard to values, attitudes and skills. Ritchie suggests that "ideally, it offers him models to be emulated, aspirations to be pursued, and security when he feels threatened" (2:160).

Since the family is instrumental in shaping the kind of person one becomes through "everyday experiences in the family, the quality of these experiences cannot be left to chance, they must be consciously decided and managed" (1:9).

The most important type of decision made in the family setting is social in nature. "Social decision-making occurs in those situations in the family where





there is conflict in values or goals" (3:3). The process used "is one of order and direction of change rather than one of selecting and rejecting alternatives" (3:3). "The choice is a result of mediation rather than selection" (3:3). Social decisions involve people in joint action provided they are able to "share experiences and understand one another. People who constantly share action and experience are interdependent in the sense that a change in one produces an answering change in others" (4:236).

\*Thus social decisions are dependent upon interaction between and among family members. Effective interaction calls for opportunities for family members to share time and space. The White House Conference on Children expresses a concern that in our American society families may not be fulfilling one of their chief tasks; that is, the socialization of children because parents and children seemingly are encouraged to pursue separate activities (5:228, 241).

This study seeks information about the relationship between family interaction and selected characteristics of the environment. We need to know more about the interaction which exists between and among family members so that we may help families and professionals who work with families, make judicious decisions as they seek to manage the family situation to improve family life. Few studies have been done which investigate the relationship between



family interaction and given environmental characteristics. In addition, little is known about family interaction and value formation or the personality development of family members. Much of the literature (5, 6, 7, 8) takes a normative stance which assumes the more interaction, the better and the more family members involved, the better. Empirical data are needed to either support or negate these positions. Empirical data relative to family interaction and environmental characteristics could provide information for planning strategies for family management.

#### Objectives

This study is designed to investigate the relationship between family interaction and specified characteristics of the family environment. Specifically, the objectives are:

1. To determine those areas of family life where interaction occurs.
2. To investigate the relationship between family interaction and selected characteristics of the family and its environment.

Within the confines of the data used for this exploratory study, the investigation seeks answers to the following questions:



1. Who interacts with whom in the family?
2. What activities do family members share as they interact?
3. When do family members interact?
4. How frequently, within a 24-hour span, do family members interact?
5. What is the time span for interaction in shared activities?
6. Where does the interaction take place?

#### Assumptions

Several assumptions underlie this study:

1. The family is an essential life support system for its members; a major part of this support is dependent upon interaction between and among family members.
2. Interaction can be determined by the examination of records on how families use time.

#### Limitations

The limitations of this study include the following:

1. Only quantitative measures are used. No attempt is made to measure the quality of interaction.
2. The time records used are based on a single day in the life of a family.

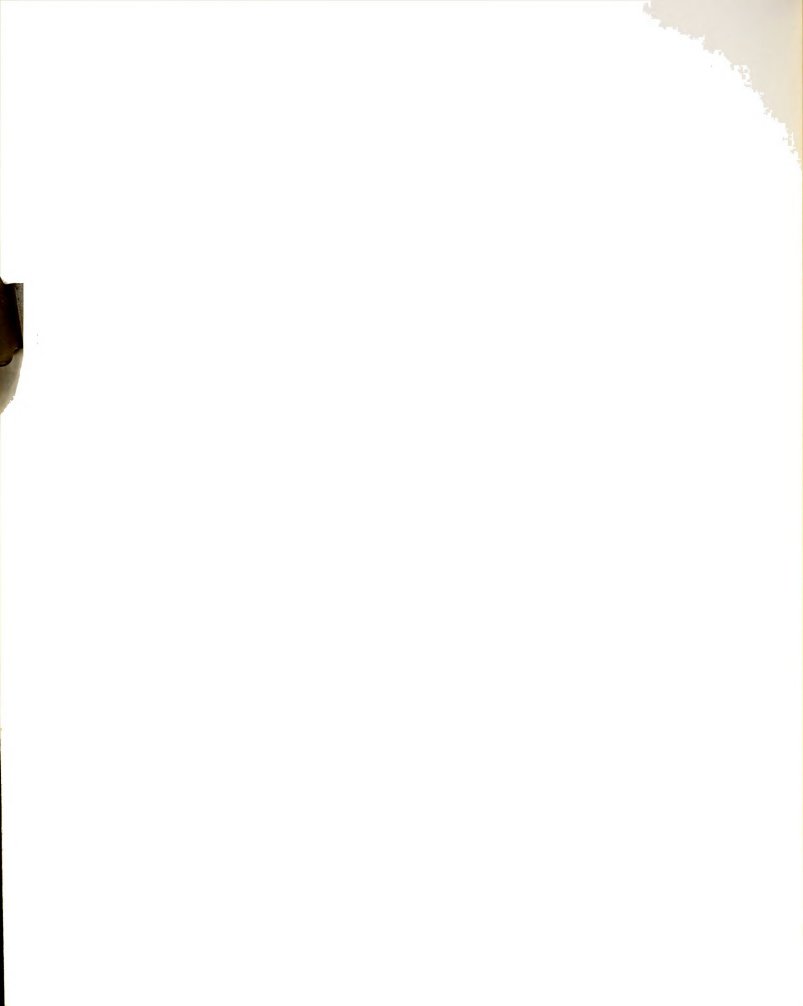


3. Activities of less than 5 minutes duration are not reported.
4. Since data were collected to study household work, detailed information is lacking for the other categories.

### Hypotheses

#### Related to Family Members and Socio-economic Level

1. There will be a significant relationship between family interaction and the number of children in a family.
2. There will be a significant relationship between family interaction and the age of the parents.
3. There will be a significant relationship between family interaction and the percentage of time each parent shares with the children.
4. Significantly more time will be shared by mothers and daughters than by mothers and sons.
5. There will be a significant relationship between family interaction and the number of hours of employment for the mother.
6. There will be a significant relationship between family interaction and the number of hours of employment for the father.





7. There will be a significant relationship between family interaction and the average number of hours the children are in school.
8. There will be a significant relationship between family interaction and the socio-economic status score of the family.

Related to Family Activities

9. There will be a significant relationship between family interaction and selected activities of the family.
  - a. There will be a significant relationship between family interaction and interaction in social activity.
  - b. There will be a significant relationship between family interaction and interaction in the eating activity.
10. There will be a significant relationship between family interaction and the frequency of shared acts in a 24-hour time span.
11. There will be a significant difference between the per cent of the total number of acts that are less than an hour and those more than an hour in duration.



12. There will be a significant relationship between family interaction and the time of day the interaction occurs.
13. There will be a significant relationship between family interaction and the day of the week.
14. There will be a significant relationship between family interaction and the season of the year.
15. There will be a significant relationship between family interaction and the place of interaction.

Related to Location  
and Family Dwelling

16. There will be a significant relationship between family interaction and the type of community in which the family lives.
17. There will be a significant relationship between family interaction and specific dwelling unit characteristics.
  - a. There will be a significant relationship between family interaction and the number of stories in the dwelling unit.
  - b. There will be a significant relationship between family interaction and the number of rooms in the dwelling unit.



- c. There will be a significant relationship between family interaction and the size of the lot.
- d. There will be a significant relationship between family interaction and the presence of a dishwasher and the use of a clothes washer, and clothes dryer.

### Definitions

For the purpose of this study, the following definitions will be used.

#### Family

The family is operationally defined as a group which consists of a husband, wife and children living in a common dwelling. Either or both parents may be employed.

#### Family Activities

Activities in which the family members are in close proximity. The activities are categorized as social, eating, household work, care of family members, and management and record keeping.

#### Family Interaction

Episodes of shared activity which involve two or more persons.



### Family Interaction Score

A score used to measure the configurations of family members as they are involved in episodes of shared activity. The configurations may be the whole family group, both parents, all the children, mother and all the children, father and all the children, mother and some of the children, father and some of the children, parents and one child, parents and two children, and two children out of three children. The interaction score is determined by multiplying the number of people in a shared activity or episode times the number of minutes used for the episode. The products for each family are totaled, then divided by the total number of family members.

### Conceptual Orientation

The conceptual design of this study is an adaptation of the interactional approach to the study of the family derived from Olson's Systems Analysis of Research Strategies (9). It draws on work in small group theory, particularly that of Homans (10). The focus of the study is on the family as "a unity of interacting personalities" (11:97), measured by the time shared in common activities. The research method employed is self-report plus an interview schedule.

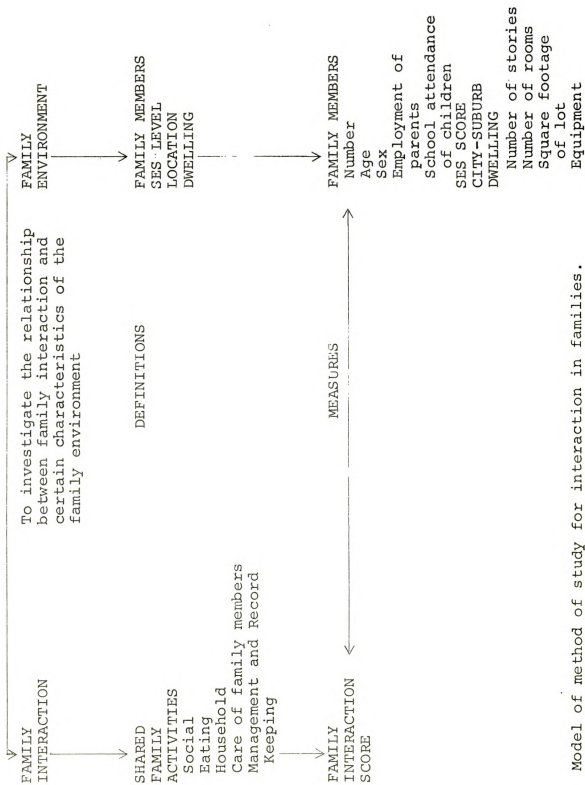




For the purposes of this study, the concepts under examination are family activity and interaction in relation to specified aspects of the family environment. The question posed is, "What is the relationship between the family environment and the number of kinds of activities which provide opportunities for interaction?" This research seeks to find the answer to what characteristics of the family environment may relate to the interaction of family members.



## OBJECTIVE





## CHAPTER II

### REVIEW OF LITERATURE

The literature is reviewed under three headings: approaches to the study of interaction, the function of interaction in the family, and the management of the family environment for interaction.

#### Approaches to the Study of Interaction

A number of approaches have been used to study social interaction. Heiss relates social interaction to role theory (12). He distinguishes between two forms of role theory (social-psychological or Meadian, and structural):

The structural theorist is primarily interested in questions of content, organization, and consequences. The Meadian might ignore these matters entirely; at least his theoretical interests would not require him to inquire into them. For him the major question is one of process. What are the learning processes involved and what is the nature of the interaction process?

Another difference between the two approaches lies in the fact that the Meadian role theorist is almost entirely interested in internal processes of the family and has restricted his attention primarily to modern Western society (12:26).



Heiss considers the two approaches described to be complementary rather than conflicting (12:27). Through social interaction family members are able to identify the various roles played by family members.

Thibaut and Kelley describe a theory of interaction which they term "primarily functionalistic" (13:5). Here the focus is on the "solutions that must be found to problems created by interdependency" (13:5). Such solutions are judged in relation to providing for the nurturance or maintenance of the group. "Thus the focus is first of all upon what is functional from the point of view of the group" (13:5). They explain that, "because the existence of the group is based solely upon the participation and satisfaction of the individuals comprising it, the group functionalism becomes an individual functionalism" (13:5). Thibaut and Kelley distinguish two kinds of functions which must be provided for if a group is to be a viable one. These are task and maintenance. They explain that,

. . . task functions would include such activities as diagnosing the problem posed by the environmental task, preparing the task for group action, and training the various members to perform task assignments. Maintenance functions include such activities as assessing the outcomes being obtained by the various members, allocating rewards, and creating new rewards for the members, particularly affiliative ones (13:290).

They suggest that the social environment is influential in determining role differentiation in the group. In part this is attributable to communication within the group.





Argyle presents a view which stresses the need to study interaction in the natural habitats of men:

. . . much recent work in social psychology [social interaction] has used highly artificial laboratory situations which are unlike anything in the outside world. There is a particular objection to this for the study of human social behavior: we learn to interact in a number of different kinds of social situation- in the family, at school, with friends, etc. - in each of which there are definite rules and role-relationships between the interactors. For this reason it is essential to study social behaviour in specific cultural settings (14:16).

Argyle calls this the "new look research" and describes it as "human ethology" (14:15). Here attention is focused on:

. . . the sequence of events taking place during social interaction - at the level of bodily contact and proximity, facial expression, bodily posture and gesture, head movements and direction of gaze, the verbal and non-verbal contents of speech (14:13).

These features he interprets as different elements of social behavior.

Bossard and Boll study family interaction by investigating family rituals. They explain ritual as a

. . . system of procedure, a form or pattern of social interaction, which has three unvarying characteristics. First, it is definitely prescribed. . . . Ritual means exactness and precision in procedure. Second, there is the element of rigidity. The longer the prescribed procedure continues, the more binding its precision becomes. And finally, there is a sense of rightness which emerges from the past history of the process, i.e., the oftener the repetition of the prescribed procedure occurs, the more it comes to be approved (15:16).

By this definition, ritual is conceived "primarily as a social process, with definite forms of interaction and a specific cultural content" (15:17). Bossard and Boll



point out that "rituals are developed coöperatively" (15:200) contributing to a feeling of "group participation, a further sharing of intimacies, and a sense of lively satisfaction" (15:200). Besides participation, rituals serve to control the behavior of family members and to sustain family values (15:201). Bossard and Boll conclude from their study that rituals provide "a certain predictability of family and individual behavior, thus easing the stress and strain of group living" (15:187). They explain,

. . . the analysis of our material shows the molding of many personality traits through the repeated practice of obligatory actions which, taken in combination, tend to develop habits of social stability and adaptability. More specifically, family ritual is related to social habits of cooperation, regularity, punctuality, and recognition of the rights of others, which obviously are significant for intra-group relations in general, and for the family group in particular (15:187).

The use of time to study daily social life has received little attention from the social scientists according to Robinson. He specifies the properties of time which make it a valuable research tool:

First of all, time (along with space) is a universal 'container' of human phenomena. It is, furthermore, capable of measurement along a single dimension. Thus, because 'Everybody has to be somewhere,' a single number representing time expenditure has the potential of placing a particular segment of human behavior in nearly full perspective (16:2).

He then cautions about a "sufficiently complex categorization scheme" (16:3) to avoid mis-identifying that which is significant. Robinson says it is "because so much can be read into time use figures that the problems here are more acute" (16:4).



Thorpe, in 1956, used the idea of a time record to study family interaction in farm and town families of lower Michigan. One of the major purposes of the study was to demonstrate:

. . . the applicability of the time record technique to a study of the family and in so doing to supply information concerning the amounts of time and kinds of activities which are commonly shared by family members in the home during the active hours of the day (17:103).

In using the time record technique, Thorpe assumed "that there is a relationship between the amounts of time spent in shared activities and the development of feelings of family solidarity" (17:103). Thorpe found that "opportunities within the home for the socialization of children . . . are limited from the standpoint of time spent there in shared activities" (17:114). She did conclude that the study demonstrated "the value of the use of time records as a technique for the investigation of patterns of family interaction" (17:114).

An earlier study, done by Snow, gave as a purpose "to develop a method and technique by which the amount of time and types of activities which family members share can be determined" (18:3). Snow reported "a careful check of the related literature revealed that no previous studies had been made which dealt primarily with the amount of time and types of activities which family members share" (18:11). Snow concluded the use of the time record was valuable to study family interaction:



Records of actual time spent together and activities shared by family groups form descriptions and concrete material on which to base an understanding of contemporary family life.

The interview method combined with record keeping of daily time schedules by individual families, produce a high percentage of usable records (18:62).

Snow further concluded that the daily time record combined with the information questionnaire was valuable to study large and small families as well as variations in families since the age and sex of all persons was available (18:63). In terms of family interaction, Snow found that all the family was together in some activity an average of 1.78 hours per day, that eating together was the activity more family groups participated in than any other, that families were together more in the morning and evening than afternoon, that families were together more on weekends than weekdays, that fathers did not share in activities with their sons and daughters as frequently as did mothers, and that mothers shared more activities with daughters; fathers shared more with sons (18:36, 43, 46, 50, 58).

Early research in the area of home management focused on the study of time from a resource use point of view (19, 20, 21). Several studies were done which investigated the time use of individuals; namely, the homemaker.

Warren studied time (1936) to find a measure that could be used to compare the work loads of different households and to determine the factors which affected the





homemakers use of time. The survey method was used with trained interviewers to fill out the records. The information given was based on the activities of the previous day and the preceeding week. Families ranged in size from two to thirteen persons with the average size, four. Of the 502 families interviewed, only half had children less than 15 years old. Warren found the homemakers used an average of 52 hours during the week for household work activities. On a daily basis this averaged about 8.75 hours (21). The cooperation or sharing of household tasks among family members depended on the size of the family as well as the age and sex of the family members. There was less cooperation on tasks in larger households than in the smaller ones. "In households of nine or more persons, 30 per cent of the males and 24 per cent of the females did not cooperate on any task" (22:236). By contrast, "in households of five persons or less, 95 per cent of the males and females cooperated on some task" (22:238). Warren also found that as the age of a girl increased, her participation in household tasks increased; a boy cooperated on few tasks, particularly if he was under 10 years of age (22:238).

Wiegand replicated Warren's method in 1952. She studied the use of time of 250 full-time and part time homemakers. Activity records were obtained by personel interview for one weekday. Three-fourths of the households were comprised of 2, 3, and 4 persons; each household was



classified by one of 6 stages in the family life cycle. The amount of help or cooperation the homemaker received from family members was negligible. One-half of the homemakers reported no sharing of homemaking activities while the remainder usually received less than one hour per day (22).

Walker and Telling's 1967-68 survey of time used in household work by 1296 husband-wife families in the Syracuse, New York, area revealed that full time homemakers used an average of 8 hours per day in household activities as compared with the employed homemakers who used 5 hours per day. Regardless of the hours worked by the homemakers, the husbands contributed an average of 1.6 hours per day to household work activity. The children contributed an average of 1.1 or slightly higher, hours per day to household work. These findings reflect little contributed by family members to household work type activities (23:45).

Early time record studies are of value from the standpoint of techniques and procedures used. The findings reported had little to do with family interaction except it may be noted that household work activities were not frequently shared. The studies of family interaction, based on the use of time records are limited.



The Function of Interaction  
in the Family

Interaction in the family is defined differently by different authors. Theodorson and Theodorson define interaction as, "behavior directed toward or influenced by another person" (24:211).

Waller uses the term as

. . . the generic name for a whole set of processes taking place between individuals; interaction denotes the set of processes by virtue of which society exists. Human beings work upon one another in divers ways. The behavior of one individual is the cause of the behavior or the mental states of others; each person's behavior is cause and effect in relation to the behavior of others (25:16).

Similarly, Hill explains:

When we come to regard two objects in a causal interconnection such that one acts upon the other we move to a level of explanation which Dewey and Bentley call interaction. Here explanations are not sought for within the skin of a given object, as it were, but in the interconnectedness of two objects or events (26:7).

Bossard and Boll elaborate on the meaning of interaction by distinguishing three levels. These are "sensory interaction, a comparatively simple form confined to reciprocal reactions through the various senses" (27:60); emotional interaction, "as in reciprocal joy, love, hate," (27:61); and the third level is intellectual, "the process taking the form of a reciprocal exchange of sentiments, ideas, abstractions, judgments, evaluations, and the like" (27:61). Bossard and Boll emphasize that



family interaction is a special kind of social interaction for several reasons,

Its intimacies are of many different kinds and degrees. They are mostly continuing in character. With few exceptions, they have the full sanction of society. They come to express themselves in a terminology which has meaning to the family members and to no one else. . . .

Another reason for the distinctive peculiarity of family interaction is to be found in the composition of the family. The family community is made up of units dissimilar in age and sex, complementary in their nature, mutually responsible, and with the unifying bond of kinship for all but husband and wife;

. . . . .  
There is about family interaction this additional distinctive feature; its naked incisiveness. One can dissemble only little in most phases of family interaction (27:58, 59).

The literature on social interaction attaches outcomes to interaction. According to Klemmer, total family interaction contributes to building good relationships in the family (7:306). Homans relates interaction to family solidarity. He posits three elements of behavior which are necessary to keep a group together in a particular environment (10:94). One of these elements is interaction. The other two are sentiment and activity (10:94).

The interaction which evolves through shared activities plays an important part in the development of the child:





A child learns, he becomes human, primarily through participation in a challenging activity with those he loves and admires. It is the example, challenge, and reinforcement provided by people who care that enable a child to develop both his ability and his identity. . . . It is in work and play with children, in games, in projects, in shared responsibilities with parents, adults, and older children that the child develops the skills, motives, and qualities of character that enable him to live a life that is gratifying both to himself and those around him (5:241).

Through shared activities, the child comes into contact with other family members. Kenkel states that "the only reason a human has a personality is that he has been reared by persons" (8:234). The report of Forum 15 from the 1970 White House Conference on Children emphasizes the importance of human contact:

. . . *children need people in order to become human.* The fact is fundamental because it is firmly grounded both in scientific research and in human experience. . . . The young cannot pull themselves up by their own bootstraps. It is primarily through observing, playing, and working with others older and younger than himself that a child discovers both what he can do and who he can become, that he develops both his ability and his identity. And it is primarily through exposure and interaction with adults and children of different ages that a child acquires new interests and skills, and learns the meaning of tolerance, cooperation, and compassion (5:242).

Bossard and Boll emphasize that "a family pattern of interaction is not a one-way street with the arrow pointing from parents to children. Parents do things to and for children, it is true; but children reciprocate" (27:78). Klermer identifies this as the "new family interaction concept" (7: 296). He explains,



As Americans moved into the space age, the parent-child emphasis shifted again. More and more experts came to believe that the parents weren't altogether to blame. The child, they postulated, was not a passive victim of his environment but rather an active participant in his family group. Considerable evidence was developed for the notion that, while the parent might affect the child, the child also affected the parents. Each family member was, according to this whole-family concept, an important actor whose presence codetermined the total performance of the family group (7:296, 297).

Thus interaction, conceived as an on going process with no definite limits, serves to influence or change the behavior of both children and parents.

Dorothy Lee in Freedom and Culture, gives a description of growing up among the Tikopia which illustrates the function interaction plays in establishing attitudes toward work. At a very early age the child is intentionally introduced to a large number of people of different sex and age and relationship. She explains that this is "not merely a recognition of the dependence of the infant. It is an expression of the interdependence within the social unit" (28:30). In a Tikopia household all the family works together. The satisfaction which is derived from shared work activities seems to eliminate the distinction between household tasks and social activities, "no one apparently wants to be alone so as to concentrate or to work more efficiently" (28:33). As a consequence, the Tikopians find "joy and sheer satisfaction" (28:33) in work as



participation and seek fuller participation and involvement as a consequence.

The literature on family interaction emphasizes the need for interaction and the positive outcomes which may be anticipated as a result of such interaction. There is, however, a paucity of research to indicate the amount or kind of interaction which leads to positive outcomes. There is also a lack of research findings to substantiate the positive outcomes assumed in the literature as the result of family interaction.

#### Management of the Family Environment for Interaction

Home management viewed from the ecological perspective, focuses on the family unit and that part of the near environment over which the family has control. Such an approach is concerned with the interrelationships between the family and its physical environment as well as the interrelationships between and among family members. The physical environment together with the members of the family and the activities they perform comprise the family environment. To manage the various sub-systems of this environment so that desired outcomes may be attained, a systems approach may be useful.



Churchman defines system as "a set of parts coordinated to accomplish a set of goals" (29:29). He explains,

. . . management systems can be looked upon as essentially information-processing systems, in which the information takes the form of data about objectives, environment, resources, and components (missions) (29:77).

This study seeks information about the family environment which may influence the amount of family interaction. Such information should be useful in making decisions relative to the well-being of families.

Attention needs to be given to activities in the home setting which may provide opportunities for interaction. For a number of years, home management researchers have given attention to kinds of activities performed in the household and who performed the activity. The Warren (22), Wiegand (22), and Walker-Telling (23) investigations, cited earlier, showed very little activity time under the household work category that was shared with other family members. These studies did not record and or analyze shared time for other categories of activities since such did not serve their purposes.

Snow (18) and Thorpe (17) broadened the range of activities studied as they investigated the time use of family members. Snow used nine activity categories which were: eating, doing household activities, doing outdoor activities, going on errands, having fun, going to community





affairs, making plans and discussing problems, taking care of personal needs, and miscellaneous (18). Thorpe used twelve

. . . kinds of activities which were sometimes shared by family members. These were: house care, personal care, child care, laundry, sewing, farm chores, food preparation, eating, meal clearing (including dish-washing), leisure, studying or business activities, and miscellaneous (17:45).

The literature supports the idea that time use is a viable method for gaining insight into the interaction of families and points out the need to study the relationship between family patterns of interaction and given environmental characteristics.



## CHAPTER III

### PROCEDURE

The procedures used in the study are described in three sections: selection and description of sample; data selection; and data analysis.

#### Selection and Description of Sample

In 1967-68 Walker and Telling surveyed 1296 husband-wife families in the Syracuse, New York, area. Data for this study were derived from their survey. The survey sample was drawn:

. . . from names of 45,000 husband-wife families, arranged by city and suburbs and by the number and ages of children--the major control variable. From pools of names so arranged, 42 families were randomly selected for each of 32 classifications of family composition. The types of families sampled included families with no children and with 1, 2, 3, 4 to 6, and 7 to 9 children; families with youngest child under 1 year of age, 1 year old, 2 to 5, 6 to 11, and 12 to 17 years of age; and families with all children of the same age and with varying combinations of ages. In families with no children, age of the home-maker was the control variable. Families with adults other than husband and wife were excluded from the sample.

No attempt was made to control socioeconomic status, but it was assumed that families with high, middle, and low socioeconomic status would be selected randomly in the same proportion that they existed in the population. Likewise, employment of the home-maker was a random variable (23:1).



For the present study, a purposive sub-sample was selected to conform to predetermined criteria. The criteria were: homogeneity in terms of families with 1, 2, and 3 children between the ages of 6 and 11, economy, availability of complete time records for the total family, and intact (husband and wife present) families. The ages of the children were thought to represent a group which has received less attention than the adolescent and the infant or young child.

#### Number, Age, and Sex of Children

The children ranged in age from 6 to 11 years old. All families had at least one child. The number, age, and sex of the children are shown in Table 1.

#### Age of Parents

Mothers ranged in age from 25 to 54 years with 77 per cent between 25 and 39 years of age. Fathers ranged from 25 to over 55 years of age with 61 per cent between 25 and 39 years of age. Table 2 shows the age distribution for mothers and fathers.

#### Socio-Economic Status of the Family

The socio-economic status of the family was based on the combined Educational-Occupational score developed by Hollingshead. This score was computed from the occupational role of the household head, based on an occupational scale



TABLE 1.--Age, sex and number of children.

Family Size	Number of Families N=126	Number of Females N=111	Ages of Females					Number of Males N=141	Ages of Males							
			6	7	8	9	10		11	6	7	8	9	10	11	
1 child	42	23		5	3	2	6	4	3	19	0	4	1	3	7	4
2 children	42	43		6	6	10	7	9	5	41	6	11	7	6	4	7
3 children	42	45		8	10	9	4	9	5	81	11	12	16	11	14	17





TABLE 2.--Ages of mothers and fathers.

Age Range	Mothers		Fathers	
	N	%	N	%
	N=126		N=126	
Under 25	0	0	0	0
25 - 39	97	77	77	61.1
40 - 54	29	23	48	38.1
55 & over	0	0	1	.8
		100		100.0

and the amount of formal schooling, based on an educational scale. The factors of occupation and education were combined by weighting the individual scores. Class scores were divided into five groups with one the highest (30:13). From the scores, rankings from 11 to 77 were made. Table 3 shows the distribution for this study.

TABLE 3.--Distribution of SES scores as classified by Hollingshead.

Class		Families	
Score	Rank	N	%
		N=126	
I	11-17	18	14.3
II	18-27	18	14.3
III	28-43	43	34.1
IV	44-60	38	30.2
V	61-77	9	7.1
			100.0



Employment of Parents

For this study, parents were classified as employed if they worked during the seven day period prior to the interview and if they did any work for pay or if they worked 15 hours or longer as an unpaid worker in a family enterprise. In the 126 families studied, over 55 per cent of the mothers were not employed. By contrast, over 90 per cent of the fathers worked 40 hours a week or longer. Table 4 shows the number of hours worked by the parents in the 7 day period which preceded the initial interview.

TABLE 4.--Parents hours' of employment.

Hours	Mothers		Fathers	
	N N=126	%	N N=126	%
0	74	58.7	2	1.6
1 - 14	14	11.1	0	0
15 - 29	15	11.9	2	1.6
30 - 39	11	8.7	5	4.0
40	5	4.0	47	37.3
41 - 49	5	4.0	18	14.3
50 - 59	2	1.6	34	27.0
60 - 69	0	0	12	9.5
70 & over	0	0	6	4.8
		<u>100.0</u>		<u>100.0</u>



### Location and the Family Dwelling

The families lived in either the city (55.6%) or in the suburbs (44.4%). Over 75 per cent lived in a single family dwelling. Table 5 gives the details of house type.

TABLE 5.--Type of housing.

Type'of House	Number of Families	Per Cent
	N=126	
Apartment	5	4.0
Single dwelling	108	85.7
Two-family dwelling	13	<u>10.3</u>
		100.0

Other housing characteristics related to the number of stories, number of rooms, square footage of the lot and household equipment are presented in Table 6, 7, 8, and 9.

TABLE 6.--Number of stories in family dwelling.

Number of Stories	Families	
	N	%
	N=126	
1	38	30.2
2	69	54.8
3	5	4.0
Split level	14	<u>11.1</u>
		100.+



TABLE 7.--Number of rooms in the dwelling, excluding bathroom.

Number of Rooms	Families	
	N	%
	N=126	
1 to 3	0	0
4	3	2.4
5	18	14.3
6	39	31.0
7	26	20.6
8	24	19.0
9 or more	16	12.7
		100.0

TABLE 8.--Square footage of lot.

Square Footage	Families	
	N	%
	N=126	
Unknown	4	3.2
Under 6,000 square feet	27	21.4
6,000 to 9,999 square feet	54	42.9
10,000 to 19,999 square feet	24	19.0
Over 20,000 square feet	17	13.5
		100.0





TABLE 9.--Selected pieces of household equipment owned or used by the families.

Equipment	Families	
	N N=126	%
<u>Dishwasher</u>		
Owned	44	34.9
Not owned	82	65.1
		<u>100.0</u>
<u>Clothes Washer</u>		
Used	77	61.0
Not used	49	39.0
		<u>100.0</u>
<u>Clothes Dryer</u>		
Used	52	41.3
Not used	74	58.7
		<u>100.0</u>

Data Selection

Specific data were selected from the data bank of the Syracuse, New York, study. The Walker and Telling instrument consisted of three parts; the interview schedule, menu sheets, and two twenty-four time records.\* The interview schedule provided demographic and environmental data. The schedule was administered by trained interviewers.

The menu sheets, prepared by the homemakers, gave information about the number of meals served, who prepared the meals and the number who ate together as well as the food items served at each meal.

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\* The complete instrument is on file with Dr. Kathryn Walker, New York State College of Human Ecology, Cornell University, Ithaca, New York.



Use of time was recorded for two days in units of 5 minutes. The first day's record was filled in by a trained interviewer as the homemaker recalled the time use of family members for the previous day. At the same time, the interviewer instructed the homemaker on how to keep the time record. A second record was then left with the homemaker to be completed for the next day. Both records were checked by other family members for accuracy in recording their time use. Fifteen categories were used to record the time. These categories were regular meal preparation, special food preparation, after-meal cleanup, regular house care, special house care and maintenance, care of yard and car, washing by machine, ironing, special care and construction of clothing and household lines, physical care of family members, other care of family members (for example, helping with lessons and reading to children), marketing, management and record keeping, other work (school, paid and volunteer work), and other activities (all other personal, family and social activities).

For the present study, the investigator selected and coded specific information that would relate to interaction in the family. The researcher coded from the time record for the second day only that information which gave evidence of family members sharing time together. The evidence used, was two or more family members sharing the same activity block for the same unit of time. The



activity categories used were: social, eating, household, care of family members, and management. For these shared activities additional information about the day of the week, time of day, season of year, time activity started and duration of the activity was coded. In addition, who participated in the activity as well as the age and sex of each child was coded. This coded information was placed on coding sheets, checked, then punched on IBM cards and verified. Additional demographic and housing information was used from previously coded material.

The EWAY library program developed by the Computer Activities Group at Cornell University was used for the marginals.

### Data Analysis

The dependent variable of family interaction was measured by the family interaction score. Dimensions of family interaction which were thought to contribute the variations in the family interaction scores were measured to determine the percentage these independent variables contributed to or influenced the family interaction score. The four dimensions associated with interaction were conceived to be (1) who participated in the activity, (2) what the activity was, (3) where the activity took place, and (4) when the activity took place. Each dimension was made up of several categories. The categories associated with the dimensions are listed in Illustration 1.



## ILLUSTRATION 1.--Dimensions of family interaction.

Dimensions	Categories
<u>Who participated in the activity</u>	Whole family Both parents All children Mother plus a child or children Father plus a child or children Mother and all children Father and all children Parents with 1 child Parents with 2 children Two children with 3 in the family
<u>What activity</u>	Social Eating Household Physical and other care of family members Management
<u>Where the activity took place</u>	Home Away from home
<u>When the activity took place</u>	Morning Afternoon Evening

Calculation of the Family Interaction Score

A family interaction score was developed. Then a score was calculated for each family. This was done by multiplying the number of people in each activity or episode of interaction by the number of minutes used for each activity. The resultant products were then added together and divided by the total number in the family. The following formula was used:





$$\text{Family Interaction Score} = \frac{\sum_{i=1}^a N_i \times T_i}{F}$$

a = total number of acts or episodes per family  
 i = a single act or episode of shared time  
 N = number of people involved in a single act  
 T = number of minutes used for a single act  
 F = whole family or total number of family members

A sample computation of the family interaction score is given in Illustration 3, based on data presented in Illustration 2.

ILLUSTRATION 2.--Example of family interaction data record for a family of five.

Episode Number	Who	Number of People	What	Where	When	Time in Minutes
1	Parents	2	Social	Home	Morn.	20
2	Whole family	5	Eating	Away	Aft.	60
3	All children	3	Social	Home	Eve.	40
4	Parents & 2 children	4	Social	Home	Morn.	15

ILLUSTRATION 3.--Example of method used to compute the family interaction score.

Episode Number	Number of People	Minutes	Product	Score
1	2	20	40	
2	5	60	300	
3	3	40	120	
4	4	15	<u>60</u>	
Total			520 ÷ 5	140



The interaction score combined the elements of people and time. These were thought to contribute to the measurement of small group interaction. Since the size of the family was a part of the calculation, the family interaction scores were comparable, regardless of family size.

#### Calculation of the Dimension Score

To examine the dimensions of who, what, where, and when, a score was computed for each category subsumed under a dimension. The computation was similar to that used for the family interaction score. Illustration 4 gives a sample computation for the dimension scores based on the data record found in Illustration 2. It may be noted that the total of the scores for each dimension is the same as the family interaction score obtained from the calculations shown in Illustration 3. It may also be noted that the scores are the same for each of the four dimensions. Since the dimensions relate to shared activity and since the interaction score is involved with shared activity, the dimensions contribute to the family interaction score. The percentage of the interaction score contributed by each of the four dimensions was used to test hypotheses 9, 12, 13 and 15.

#### Statistical Tests Used

The statistical tests selected were appropriate to the form of the independent variables. Significant



ILLUSTRATION 4.--Example of method used to compute dimension scores.

Episode Number	Dimension	Category	Number of People	Minutes	Product	Score
2	Who	Whole family	5	60	300	
1		Parents	2	20	40	
3		All children	3	40	120	
4		Parents and two children	4	15	60	
					Total 520	$\div 5 = 104$
1	What	Social	2	20	40	
3			3	40	120	
4			4	15	60	
2		Eating	5	60	300	
					Total 520	$\div 5 = 104$
1	Where	Home	2	20	40	
3			3	40	120	
4			4	15	60	
2		Away	5	60	300	
					Total 520	$\div 5 = 104$
1	When	Morning	2	20	40	
4			4	15	60	
2		Afternoon	5	60	300	
3		Evening	3	40	120	
					Total 520	$\div 5 = 104$



relationships between family interaction scores and selected characteristics of the family environment were computed by analysis of variance and by Pearson's coefficient of correlation. Seventeen hypotheses of significance were specified and a probability level of .01 was selected to support each hypothesis. The .01 level was used in order to reveal definite trends.

Table 10 shows the statistical procedures used to test the relationship between family interaction and characteristics of the family environment with respect to seventeen hypotheses, and the instrument associated with each of these.





TABLE 10.--Methods used for the analyses of data.

Purpose of Analysis	Data Used in Analysis	Statistic and Computer Program
Test of Hypotheses 1, 11, 13, 14, 16, 17	Family composite data Demographic data Family interaction scores	Computer Activities Group of Cornell University Express Program for Analysis of Variance, one-way design
Test of Hypotheses 3, 4	Family composite data	Computer Activities Group Express Program for Analysis of Variance, one-way design
Test of Hypotheses 2, 5, 6, 7, 8, 9, 10, 12, 15	Family composite data Family interaction scores	Least squares (OLS) estimation regression program (EQN) written by M. R. Norman, Wharton School of Finance, the University of Pennsylvania and modified by Elizabeth Iwan, Dept. of Agricultural Economics, Cornell University.



## CHAPTER IV

### FINDINGS

The chapter presents the results of this study in relation to each of seventeen hypotheses. The hypotheses are divided into three groups: (1) those related to family members and the socio-economic level of the family, (2) those related to family activities, and (3) those related to location and the family dwelling. In addition, descriptive findings are presented to give supplementary background.

#### Descriptive Findings

##### Related to Group Configurations

The group configuration most common was that of the mother and all the children. The whole family configuration was second. The configurations least in evidence involved the parents with one or two of the children. It thus seemed that if the parents were in the picture, all the children were with them. Table 11 gives the group configurations based on the number of interaction episodes.



TABLE 11.--With whom interaction takes place.

Group Configurations	Number of Interaction Episodes	Percent of Interaction Episodes
N=2321		
Whole Family	412	17.8
Parents	285	12.3
All Children	354	15.3
Mother plus some Children	242	10.4
Father plus some Children	115	5.0
Mother and all Children	426	18.4
Father and all Children	334	14.4
Parents and one Child	35	1.5
Parents and two Children	29	1.3
Two out of three Children	89	3.8
		100.2*

\*Error due to rounding.

#### Related to Activities

Family members participated in a variety of activities. Over sixty per cent of these were categorized as social; this included such activities as recreation, play,



and visiting. Social activity combined with eating accounted for seventy five per cent of the interaction in the families. The next highest per cent, care of family members, included both the physical care and other activities such as helping with lessons and reading to children. A breakdown of the activities by categories is given in Table 12.

TABLE 12.--Number of episodes of interaction according to activity category.

Activity Category	Number of Interaction Episodes	Percent of Interaction Episodes
N=2283		
Social	1406	61.6
Eating	339	14.8
Household	220	9.6
Meal Preparation	41	1.8
Meal Cleanup	39	1.7
House Care	45	2.0
Special House Care	25	1.1
Yard Care	19	.8
Laundrying	1	0.0
Ironing	0	0.0
Marketing	50	2.2
Care of Family Members	304	13.3
Management	14	0.6
		99.9*

\*Error due to rounding.





Related to Frequency  
of Interaction

Families varied considerably relative to the number of episodes of interaction. There were as few as 5 and as many as 42 episodes. A list of the families with the number of interaction episodes for each is given in the Appendix. The range and mean for the number of interaction episodes according to family size is given in Table 13.

TABLE 13.--Range and mean of interaction episodes by family size.

Family Size	Range	Mean
1 child	5 - 25	13
2 children	6 - 38	21
3 children	11 - 42	22

Related to Place  
of Interaction

Over eighty-five per cent of the interaction episodes took place in the home setting which included the yard and dwelling. For the most part, marketing activity accounted for the interaction episodes away from home. Table 14 gives the information about the place of interaction based on number of interaction episodes.



TABLE 14.--Place of interaction.

Place	Number of Interaction Episodes	Percent of Interaction Episodes
N=2373		
At Home	2077	87.5
Away	296	12.5
		100.0

Related to the Family  
Interaction Score

The interaction of the families in this study as measured by the family interaction score showed a wide range. The interaction score for each family is given in the Appendix. The range of the interaction scores by family size is given in Table 15.

TABLE 15.--Range of family interaction scores by family size.

Family Size	Range
1 child	96.67 - 806.67
2 children	233.75 - 792.50
3 children	256.00 - 786.00



Hypotheses Related to Family Members  
and the Socio-economic Level  
of the Family

Hypothesis 1: Interaction  
and Family Size

There will be a significant relationship between family interaction and the number of children in a family.

The three sub-groups of the sample representing families with one, two and three children were compared on the basis of their interaction scores. Analysis of variance was used to test differences between the three groups. The results of the analysis of variance were not significant (Table 16); therefore, the hypothesis was not supported by this study.

TABLE 16.--Analysis of variance of the family interaction scores according to family size.

Family Size	Number of Families N=126	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
1 Child	42	381.11	175.20	2/123	4.06
2 Children	42	482.14	160.03		
3 Children	42	454.79	168.78		

\*Critical value of F at .01 level = 4.78

Since the number of children did not contribute to differences in the family interaction score, a decision



was made to treat the sample as a single group of 126 families to test the remaining hypotheses.

Hypothesis 2: 'Interaction  
and Age of Parents

There will be a significant relationship between family interaction and the age of the parents.

The correlation coefficient between family interaction as measured by the family interaction scores and the age of the parents was not significant (Table 17). This hypothesis was not supported.

TABLE 17.--Pearson's coefficients of correlation between total family interaction scores and selected family characteristics (126 families, Syracuse, New York, 1967).

Family Characteristic	Correlation Coefficients between Family Character- istics and the Inter- action Scores
Age of Parents	
Mothers	-.026
Fathers	-.052
Socio-economic Score of Fathers	.063
Employment of Parents	
Mothers	.030
Fathers	-.141
School Time of Children	-.755**
Number of Family Acts, Shared	.455**

\*\*Significant at the .01 level,  $r = .228$ .





### Hypothesis 3: Interaction with Parents

There will be a significant relationship between family interaction and the percentage of time each parent shares with the children.

Analysis of variance was used to test differences between family interaction as measured by the percentage of the interaction score contributed by mothers to the time shared with their children and the percentage of the interaction score contributed by fathers. The results of the analysis of variance given in Table 18 showed that mothers did share significantly more time with their children than did the fathers. This hypothesis was supported by the study.

TABLE 18.--Analysis of variance of the family interaction scores according to the percentage of time each parent shared with the children.

Parents	Number of Families	Percent of Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
Mothers	126	23.30	18.16	1/250	10.10
Fathers	126	16.46	15.90		

\*Critical value of F at .01 level = 6.70

### Hypothesis 4: Interaction of Mothers with Children

Significantly more time will be shared by mothers and daughters than by mothers and sons.



Analysis of variance was used to test differences between the per cent of total time contributed by mothers as they shared time with their sons and the amount of time shared with their daughters. This hypothesis was tested by using only those families who had sons and daughters and by eliminating those cases where mothers interacted with all the children. The results of the analysis of variance given in Table 19 showed that the sex of the children had no effect on the measure used; namely, total time. The hypothesis was not supported by the study.

TABLE 19.--Analysis of variance of the time mothers interacted with sons and the time mothers interacted with daughters.

Group	Number of Families	Percent of Total Time	Standard Deviation	Degrees of Freedom	F Ratio*
Sons	48	2.65	5.09	1/94	1.96
Daughters	48	4.51	7.67		

\*Critical value of F at .01 level = 6.90

Hypothesis 5: Interaction  
and Employment of Mother

There will be a significant relationship between family interaction and the number of hours of employment for the mother.

The correlation coefficient between family interaction as measured by the family interaction scores and



the number of hours of employment for the mother was not significant (Table 17). This hypothesis was not supported.

Hypothesis 6: Interaction  
and Employment of Father

There will be a significant relationship between family interaction and the number of hours of employment for the father.

The correlation coefficient between family interaction as measured by the family interaction scores and the number of hours of employment for the father was not significant (Table 17). This hypothesis was not supported.

Hypothesis 7: Interaction  
and School

There will be a significant relationship between family interaction and the average number of hours the children are in school.

The correlation coefficient between family interaction as measured by the family interaction scores and the average number of hours the children were in school was significant (Table 17). The more time the children were in school, the lower the family interaction score. This hypothesis was supported.

Hypothesis 8: Interaction  
and Socio-economic Level

There will be a significant relationship between family interaction and the socio-economic status score of the family.



The correlation coefficient between family interaction as measured by the family interaction scores and the socio-economic status scores of the fathers was not significant (Table 17). This hypothesis was not supported.

Hypotheses Related to  
Family Activities

Hypothesis 9: Interaction  
and Activity Categories

There will be a significant relationship between family interaction and selected activities of the family.

- a. There will be a significant relationship between family interaction and the interaction in social activity.

The correlation coefficient between family interaction as measured by the family interaction scores and social activity was significant (Table 20). As the percentage of time contributed to the interaction score by social activity increased, the total interaction score increased. This hypothesis was supported.

- b. There will be a significant relationship between interaction and interaction in the eating activity.

The correlation coefficient between family interaction as measured by the family interaction scores and the eating activity was significant (Table 20). As the percentage of time families contributed to the interaction





score by eating together increased, the family interaction score decreased. This hypothesis was supported.

TABLE 20.--Pearson's coefficients of correlation between total family interaction scores and percentage of the score contributed by family activities. (126 families, Syracuse, New York, 1967).

Family Activities	Correlation Coefficients
Social	.404**
Eating	-.333**
Household	.019
Care of Family Member	-.297**
Management	.081

\*\*Significant at the .01 level,  $r = .228$

#### Hypothesis 10: Interaction and Frequency of Activity

There will be a significant relationship between family interaction and the frequency of shared acts in a 24-hour time span.

The correlation coefficient between family interaction as measured by the family interaction scores and the frequency of shared acts during a 24-hour time span was significant (Table 17). As the frequency of shared acts increased, the family interaction score increased. The hypothesis was supported.



Hypothesis 11: Interaction  
and Duration of Activity

There will be a significant difference between the per cent of the total number of acts that are less than an hour and those more than an hour in duration.

Analysis of variance was used to test differences between the number of shared acts of less than one hour and the number of shared acts of more than one hour. The results of the analysis of variance (Table 21) showed there was a significant difference between the per cent of the total number of acts of less than an hour and the acts of more than an hour. This hypothesis was supported.

TABLE 21.--Analysis of variance of the per cent of the total number of acts of less than one hour and acts of more than one hour.

Length of Act	Number of Families	Per cent of Acts	Standard Deviation	Degrees of Freedom	F Ratio*
Less than one hour	126	78.413	14.907	1/250	915.50
More than one hour	126	21.589	14.906		

\*Critical value of F at .01 level = 6.70

Hypothesis 12: Interaction  
and Time of Day

There will be a significant relationship between family interaction and the time of day the interaction occurs.



The correlation coefficients between family interaction as measured by the family interaction scores and the time of day the interaction occurred were significant (Table 22). As the percentage of the family interaction scores contributed by interaction in the evening increased, the family interaction scores decreased. As the percentage of the family interaction scores contributed by morning and afternoon interaction increased, the family interaction scores increased. This hypothesis was supported.

TABLE 22.--Pearson's coefficients of correlation between total family interaction scores and the percentage of the score contributed by morning, afternoon, and evening (126 families, Syracuse, New York, 1967).

Time of Day	Correlation Coefficients
Morning	.405**
Afternoon	.387**
Evening	-.566**

\*\*Significant at the .01 level,  $r = .228$

Hypothesis 13: Interaction  
and Day of Week

There will be a significant relationship between family interaction and the day of the week.

Analysis of variance was used to test differences between family interaction as measured by the family



interaction scores and the day of the week. Two groups of days were used, weekday and weekend day. Weekdays were Monday through Friday and weekend days were Saturday and Sunday. The results of the analysis of variance were significant (Table 23). This hypothesis was supported by the study.

TABLE 23.--Analysis of variance of the family interaction scores with the day of the week.

Day of Week	Number of Families N=126	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
Week-day	90	367.98	127.13	1/125	94.68
Week-end day	36	617.77	137.61		

\*Critical value of F at .01 level = 6.84

Hypothesis 14: Interaction  
and Season of Year

There will be a significant relationship between family interaction and the season of the year.

Analysis of variance was used to test differences in family interaction as measured by the family interaction scores that could be associated with the season of the year. Families were divided according to when the data collection occurred; that is, during the season school was in session or during the vacation season. The results





of the analysis of variance showed that the season of the year was significant (Table 24). The family interaction score increased for the vacation season. This hypothesis was supported by the study.

TABLE 24.--Analysis of variance of the family interaction scores according to the season of the year.

Season	Number of Families N=126	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
School	106	421.12	173.40	1/124	7.90
Vaca- tion	20	535.95	131.18		

\*Critical value of F at the .01 level - 6.84

#### Hypothesis 15: Interaction and Place

There will be a significant relationship between family interaction and the place of interaction.

The correlation coefficient between family interaction as measured by the family interaction scores and the percentage of shared time which occurred within the home and away from home was not significant at the .01 level. Therefore the hypothesis was not supported.



Hypotheses Related to Location  
and the Family Dwelling

Hypothesis 16: Interaction  
and Type of Community

There will be a significant relationship between family interaction and the type of community in which the family lives.

Analysis of variance was used to test differences in family interaction as measured by the family interaction scores that could be associated with the type of community in which the family lived. Two community types were compared, city and suburb. The results of the analysis of variance shown in Table 25 indicated no relationship between the family interaction score and the type of community. This hypothesis was not supported by the study.

TABLE 25.--Analysis of variance of the family interaction scores according to where the family lived.

Where Family Lives	Number of Families N=126	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
City	70	419.21	149.88	1/124	2.17
Suburb	56	464.52	192.03		

\*Critical value of F at .01 level = 6.84

Hypothesis 17: Interaction  
and Dwelling Characteristics

There will be a significant relationship between family interaction and specific dwelling unit characteristics.



- a. There will be a significant relationship between family interaction and the number of stories in the dwelling unit.

Analysis of variance was used to test differences in family interaction as measured by the family interaction scores associated with the number of stories in the dwelling unit. The results of the analysis of variance given in Table 26 showed no relationship between the family interaction score and the number of stories. Therefore, this hypothesis was not supported by the study.

TABLE 26.--Analysis of variance of the family interaction scores according to the number of stories in the dwelling unit.

Number of Stories	Number of Families N=126	Family Interaction Score	Standard Deviation	Degrees of Freedom	F Ratio*
1	38	413.96	188.94	2/123	.702
2	69	454.91	161.09		
3, plus split level	19	433.58	179.28		

\*Critical value of F at .01 level = 4.78

- b. There will be a significant relationship between family interaction and the number of rooms in the dwelling unit.

Analysis of variance was used to test differences in family interaction as measured by the family



interaction scores associated with the number of rooms in the dwelling unit. The results of the analysis of variance given in Table 27 showed no relationship existed between family interaction scores and the number of rooms. Therefore, this hypothesis was not supported by the study.

TABLE 27.--Analysis of variance of the family interaction scores according to the number of rooms in the dwelling unit.

Number of Rooms	Number of Families N=126	Family Interaction Score	Standard Deviation	Degrees of Freedom	F Ratio*
4	3	400.55	225.40	5/120	2.14
5	18	352.79	154.77		
6	39	487.77	205.03		
7	26	444.22	166.91		
8	24	397.03	114.13		
9 and over	16	481.50	141.55		

\*Critical value of F at .01 level = 3.17

- c. There will be a significant relationship between family interaction and the size of the lot.

Analysis of variance was used to test differences in family interaction as measured by the family interaction scores associated with the square footage of the lot on which the dwelling unit was situated. The results





of the analysis of variance given in Table 28 showed no relationship between the family interaction score and the size of the lot. Therefore this hypothesis was not supported by the study.

TABLE 28.--Analysis of variance of the family interaction scores according to the square footage of the lot.

Size of Lot	Number of Families N=122	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
3,000 sq. ft.	27	418.57	177.46	3/118	.170
7,000 sq. ft.	54	439.10	165.12		
15,000 sq. ft.	24	450.10	156.74		
20,000 sq. ft.	17	488.05	216.07		

\*Critical value of F at .01 level = 3.94

- d. There will be a significant relationship between family interaction and the presence of a dishwasher and the use of a clothes washer, and clothes dryer.

Analysis of variance was used to test differences in family interaction as measured by the family interaction scores associated with the use or ownership of selected pieces of household equipment; that is dishwasher, clothes washer, and clothes dryer. The results of the analysis of variance given in Table 29 showed no relationship between the family



interaction scores and any of these pieces of household equipment. Therefore, the hypothesis was not supported by this study.

TABLE 29.--Analysis of variance of the family interaction scores according to the ownership or use of selected pieces of household equipment.

Equipment	Number of Families N=126	Family Inter- action Score	Standard Deviation	Degrees of Freedom	F Ratio*
Dishwasher					
Owned	44	437.65	158.13	1/124	.007
Not Owned	82	440.26	180.21		
Clothes Washer					
Used	77	432.06	174.18	1/124	.352
Not Used	49	450.79	170.15		
Clothes Dryer					
Used	52	404.41	166.40	1/124	3.72
Not Used	74	463.90	173.03		

\*Critical value of F at .01 level = 6.84



## CHAPTER V

### DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

The findings raise more questions than they answer but do suggest some possible directions for future studies related to the management of the family environment and family interaction. Some of the questions and limited conclusions as well as implications for future research will be given in this chapter.

#### Discussion and Conclusions

The basic objective of this study was to investigate the relationship between family interaction as measured by the family interaction scores and certain characteristics of the family environment. Family environment included members of the family, the socio-economic level of the family, the location and selected characteristics of the family dwelling. Before discussing the findings related to these aspects of the family environment, some attention will be given to the dimensions of interaction which contributed to the family interaction scores.



### Dimensions of Interaction

A group configuration which contributed to an increase in family interaction was that of mother and all the children. It was hypothesized that there would be a significant relationship between family interaction and the percentage of time each parent shared with the children. Mothers were found to share significantly more time with their children than did the fathers. The earlier studies of Snow (18) and Thorpe (17) also found mothers spent more time in shared activities with their children than did the fathers. Thorpe (17) concluded that fathers had only limited opportunities to be with their children regardless of sex. Possibly, the role expectations held by our society for mothers may influence this phenomenon. However, the findings did indicate, although no analysis was done, that another group configuration of importance was that of the whole family. Thus fathers were a part of the interaction episodes some of the time. This finding may be indicative of a change from the time of the Snow (18) and Thorpe (17) studies which were completed in the 1950's.

A significant relationship was found between social activity and the family interaction scores. That is, as social activity increased, the interaction scores increased. The reverse was found for the activity of shared eating. By contrast, Snow (18) and Thorpe (17) found that





eating together was the activity more family groups participated in than any other. Leisure was the activity that Thorpe (17) ranked second in relation to time shared by the whole family. For purposes of interpretation, leisure and social activity may be considered the same. An outcome of the present study seems to indicate that families need to share more than the meal hour if their interaction scores are to increase.

Warren's (21) study of time, and the subsequent studies by Wiegand (22), and Walker and Telling (23), showed low family cooperation in household activities. The present study also showed low family participation in household activities. A distinction was drawn between cooperation and participation. In previous studies, cooperation referred to help given by family members in the performance of work. Time and space may or may not have been shared. For this study, participation related to persons sharing time and space. The present study attempted to identify shared household activity which could provide opportunities for role modeling. It seemed important in terms of a better understanding of socialization and more effective family management to be knowledgeable about the degree to which family members performed given activities and the degree to which they shared or interacted in such activities. Consistency in findings over time raised the question, "Why so little cooperation or participation in such repetitive and necessary activities?" Does the homemaker prefer to work



alone in activities for which she has developed a routine? Have we devalued household work so that family members do not feel the "joy of participation" (28)? Do we not view participation by the children in work activities as resource building? If work is not done cooperatively, so that children may be taught, by what means or in what ways are homemaking skills transmitted? What roles played in the home influence the formation of values for both adults and children?

Of note is the inverse relationship between the family interaction scores and the care of family members. An increase in the time contributed to the care of family members resulted in a decrease in the total family interaction scores. What does this mean? To further family interaction, should the care of family members be delegated to others or should the process of management be directed toward the families increased involvement in the mutual care of family members?

Table 14 showed that 87.5 per cent of the interaction in families takes place at home, however, the coefficient of correlation for place of interaction established no significance. Does this indicate that the amount of interaction in the home setting is so little that to increase the interaction score, the family will have to be together away from home? Thorpe (17) also found that the whole family shared in few activities. If



family members are not in the home for periods of time and this seems to be the case with school age children and if interaction among family members is important, where then and under what conditions may the family be together? In what ways and in what places can interaction be achieved outside the family dwelling? What changes in the family environment or situation might result in more interaction within the home?

It was found that families with high interaction scores interacted in the morning and afternoon; as evening interaction went up, the total family interaction scores went down. Snow (18) found that families were together more in the morning and evening than afternoon. The differences may be related to the definition of afternoon. For this study, afternoon extended from the hour 12:00 to 17:00 and evening from 18:00 to 24:00. Why does evening interaction affect the family interaction score adversely? Do other systems make demands on the evening hours such that family members are segregated by age and activity?

In relation to the day of the week, the findings showed a significant relationship between family interaction and weekend days; that is, family interaction increased on the weekend. Snow (18) and Thorpe (17) also found that families were together more on weekends than on weekdays. If the weekends afforded more opportunity



for interaction what difference would a four or three day work week make? What difference would a shorter work day make?

The season of the year also influenced the interaction scores with the vacation season contributing to an increase. If school systems were to operate with a twelve month calendar, what effect would this have on family interaction? What difference would the continuous time afforded by a weekend or vacation period make in terms of the kinds of activities families may share?

#### Related to Family Members

Family size did not appear significant but the sample did not include large families. Should large families have significantly influenced the family interaction score what bearing would this have on family planning? Should some families have four or five children and others none? What is a desirable family size in terms of effective interaction?

The age of the parents was not significant. The age grouping was such that the under 25 years of age and over 55 years of age were not included. Would a more varied age range have made a difference?

Sex of parents was significant in that the mother shared more time with the children than did the father. Sex of children did not seem to make a difference. If





the roles of mother and father become more blurred in the family, would this finding still hold?

The employment of neither the mother nor the father had any significance in relationship to the interaction scores. In this sample very few of the mothers were employed. Would there have been a difference if the hours of the mothers employment had matched the hours of the fathers?

There was a significant relationship between school time and the family interaction scores. As the average amount of time spent in school increased, family interaction scores decreased. The finding may not be surprising but it raises the question, if the task of socialization and personality development ascribed to families by the larger society interact, what role can the school system effectively play in this area or is there some other system that could do the job?

#### Related to the SES Level

Contrary to popular thought which attributes differences in values and life styles to families of different socio-economic levels, the SES level of the family as measured by Hollingshead's Educational-Occupational score was not significant. The finding supports increasing evidence that socio-economic class is becoming less valuable in determining differences in family life styles.



### Related to Location

The city-suburb location of these families was not significant in relation to the interaction scores. Would there have been a difference if rural had been included?

### Related to the Family Dwelling

No characteristic of the family dwelling was significant in relation to the interaction scores. May it then be assumed that physical characteristics make no difference or were the critical characteristics not studied? Would a study which investigated the design and layout of rooms have produced different findings?

### Implications for Further Research

The following directions are suggested by this study for further research in family interaction:

1. With the significance of the social activity established, more complex data is needed about the content of this category. What are families actually doing when they socialize?

2. Knowledge about the amount of interaction is only a first step. Of crucial importance is the quality of this interaction. Research is needed to determine quality indicators and relate these indicators to the specific goals of socialization and personality development.



3. The interaction network of the family has been studied but this is only a part of the picture. Family members interact with others both within the home and outside the home. What patterns of interaction are observable with non-family groups? What are the outcomes of these patterns to the individual family member? Are other-person networks more instrumental in shaping values and personality development than the family network?

4. Are the everyday activities of the family so broken up for the children with school and community activities and for the parents with work and community activities that insufficient time is left in which to interact? Does duration of interaction make a difference in outcome? Over time, what accrues from sustained periods of interaction with the same group? Homans (10) suggests increased sentiment for group members but are there other outcomes such as feelings of security and belongingness?

5. Some families had high interaction scores, some low. What would an in depth study of these selected families net in terms of providing tools to understand and explain interaction?

6. Would time records which extend over a longer period of time such as a week or a month result in different findings?

This study has given some clues as to what contributes to more interaction time in the family. It has



provided an indicator for assessing the amount of family interaction. Critical, at this point in time, is an indicator for assessing the quality of family interaction. From a managerial stance, knowing the contribution that interaction makes to the development of family members, empirical data that would provide both quantitative and qualitative measures would be valuable to the manager in arranging the family environment to achieve desired goals.





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# LITERATURE CITED

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## APPENDIX



Family Interaction Scores and Number of Shared Acts, Grouped  
by Family Size.

	Family Identification Number	Interaction Scores	Number of Interaction Episodes
	<u>One Child Families</u>		
1.	140001	331.67	14
2.	140005	350.00	6
3.	140006	183.33	12
4.	140007	103.33	6
5.	140009	260.00	13
6.	140012	496.67	15
7.	140041	333.33	10
8.	140047	223.33	14
9.	140052	320.00	21
10.	140054	466.67	12
11.	140055	243.33	14
12.	140058	793.33	25
13.	140074	300.00	12
14.	140093	806.67	18
15.	140127	286.67	10
16.	140128	405.00	15
17.	140.136	663.33	8
18.	140141	96.67	12
19.	140142	633.33	23
20.	140152	515.00	20



	Family Identification Number	Interaction Scores	Number of Interaction Episodes
21.	140175	348.33	14
22.	140215	353.33	5
23.	140423	433.33	6
24.	140424	223.33	5
25.	140432	683.33	11
26.	140433	195.00	13
27.	140437	295.00	19
28.	140438	445.00	13
29.	140440	385.00	15
30.	140443	503.33	11
31.	140448	296.67	8
32.	140449	270.00	15
33.	140450	358.33	21
34.	140452	250.00	13
35.	140455	183.33	5
36.	140456	566.67	15
37.	140459	470.00	18
38.	140466	173.33	13
39.	140468	681.67	14
40.	140470	330.00	10
41.	140924	436.67	12
42.	140938	313.33	11



	Family Identification Number	Interaction Scores	Number of Interaction Episodes
	<u>Two Children Families</u>		
43.	244003	400.00	19
44.	244005	620.00	25
45.	244006	792.50	22
46.	244007	607.50	20
47.	244008	306.25	16
48.	244014	321.25	19
49.	244016	695.00	29
50.	244017	636.25	23
51.	244037	265.00	15
52.	244038	412.50	6
53.	244040	548.75	19
54.	244042	293.75	15
55.	244045	680.00	38
56.	244046	255.00	8
57.	244047	710.00	38
58.	244049	605.00	21
59.	244050	721.25	13
60.	244051	233.75	10
61.	244052	782.50	30
62.	244053	405.00	13
63.	244092	440.00	17





	Family Identification Number	Interaction Scores	Number of Interaction Episodes
64.	244124	380.00	17
65.	244125	286.25	28
66.	244129	386.25	32
67.	244406	542.50	18
68.	244407	550.00	24
69.	244409	588.75	24
70.	244414	540.00	22
71.	244425	510.00	26
72.	244437	320.00	20
73.	244446	783.75	15
74.	244447	422.50	15
75.	244449	355.00	15
76.	244450	590.00	31
77.	244453	552.50	19
78.	244455	442.50	21
79.	244458	307.50	15
80.	244459	482.50	22
81.	244460	340.00	28
82.	244914	361.25	19
83.	244928	377.50	36
84.	244957	400.00	17



Family	Identification Number	Interaction Scores	Number of Interaction Episodes
<u>Three Children Families</u>			
85.	344001	456.00	15
86.	344002	416.00	13
87.	344003	324.00	26
88.	344004	379.00	13
89.	344005	764.00	28
90.	344006	643.00	42
91.	344007	292.00	30
92.	344008	767.00	25
93.	344009	417.00	33
94.	344010	348.00	18
95.	344011	456.00	14
96.	344012	715.00	15
97.	344013	557.00	35
98.	344014	627.00	25
99.	344018	681.00	17
100.	344020	386.00	22
101.	344036	696.00	31
102.	344038	397.00	23
103.	344073	292.00	28
104.	344086	786.00	26
105.	344093	114.00	15



	Family Identification Number	Interaction Scores	Number of Interaction Episodes
106.	344124	322.00	17
107.	344126	275.00	21
108.	344128	581.00	21
109.	344130	513.00	38
110.	344134	294.00	25
111.	344412	651.00	17
112.	344423	577.00	22
113.	344433	488.00	36
114.	344436	278.00	11
115.	344438	303.00	18
116.	344439	394.00	13
117.	344441	312.00	30
118.	344446	298.00	14
119.	344447	500.00	32
120.	344448	491.00	15
212.	344449	256.00	19
122.	344452	314.00	22
123.	344454	355.00	14
124.	344461	372.00	29
125.	344700	333.00	16
126.	344705	681.00	22











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