

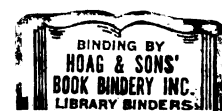
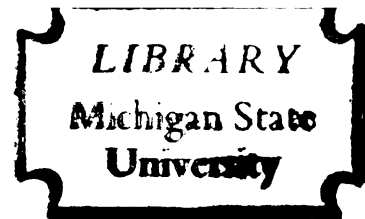
PATTERNS OF COMMUNICATION IN
NORMAL AND CLINIC FAMILIES

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ABSTRACT

PATTERNS OF COMMUNICATION IN NORMAL AND CLINIC FAMILIES

by Lennard A. Leighton

This study was undertaken to determine whether normal and deviant families could be differentiated on the basis of their communicative interaction. Concrete measures such as number of times each member spoke, average duration of speech, total length of time each member spoke, number of interruptions, frequency of simultaneous speech, and number of double messages communicated were employed. Eight normal and seven deviant families (four or five members each) whose interactions were recorded by Moore (1966) were used. Normal families had no history of psychiatric disorder and were obtained through labor unions and church groups. Deviant families had been referred to the Michigan State Psychological Clinic because a male child between the ages of eight and thirteen was an underachiever and/or behavior problem in school. No clinic family received any treatment during the course of the experiment.

It was hypothesized that the two groups of families would show significant differences on the above stated variables. Further, differences were expected between father and mother within the same group. More specifically, normal fathers spoke more often, for a greater total length of time and for a longer average duration, than clinic fathers. The reverse was true when normal and clinic mothers were compared. Clinic children spoke more often and for a greater total length of time than normal children, whereas average duration of speaking was approximately the same. Normal families showed fewer interruptions, fewer instances of simultaneous speaking, and fewer numbers of double messages than did the clinic families.

Comparisons within families revealed that the normal father spoke more often and for a greater total duration than normal mothers, while average duration of speech was equivalent. Clinic mothers spoke more often, for a greater total length of time, and for a longer average duration than did clinic fathers. Interruption data showed that there were no differences between the normal father and the normal mother. In the clinic families, the father interrupts more often than the mother. There is no difference in the number

Lennard A. Leighton

of times the normal father and mother are interrupted, while the clinic mother is interrupted more often than the clinic father. The latter difference is maintained even when number of times speaking is held constant.

The results led the author to infer patterns of dominance and submission in the two groups of families. The normal family is characterized by father-dominance which appears to be accepted by the other members of the family. The clinic family is characterized by mother-dominance when frequency and temporal measures of speaking are considered. However, data on interruptions suggests that this is a relatively unstable power hierarchy which leads to a recurring struggle on the part of the mother to maintain her position.

Finally, the effects of a pathological style of interaction on the children, and directions for further research are discussed.

Lucy R. Ferguson

PATTERNS OF COMMUNICATION IN
NORMAL AND CLINIC FAMILIES

By

Lennard A. Leighton

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DEDICATION

To my parents, without whose
constant encouragement and
support I might never have
come this far.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	v
LIST OF APPENDICES	vii
Chapter	
I. INTRODUCTION	1
Statement of the Problem.	1
Relevant Literature	3
II. METHOD	19
Subjects.	19
Interviewing Procedure.	21
Rating Procedure.	23
III. RESULTS.	25
IV. DISCUSSION	43
V. SUMMARY.	51
REFERENCES	54
APPENDIX	58

LIST OF TABLES

Table	Page
1. Comparison of Normal and Clinic Family Groups on Several Composition Criteria.	21
2. Means and T Ratios for Total Number of Times Speaking, Normal versus Clinic Families. . .	25
3. Means and T Ratios for Total Duration of Speech, Normal versus Clinic Families. . . .	27
4. Means and T Ratios for Average Duration of Speech, Normal versus Clinic Families. . . .	28
5. Means and T Ratios for Number of Times Each Member of the Family Interrupts Another Member, Normal versus Clinic Families. . . .	30
6. Means and T Ratios for the Number of Times Each Family Member is Interrupted, Normal versus Clinic Families	32
7. Means and T Ratios for Total Number of Family Interruptions, Normal versus Clinic Families	34
8. Means and T Ratios for Total Number of Times Speaking, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother .	35
9. Means and T Ratios for Total Duration of Speech, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	36
10. Means and T Ratios for Average Duration of Speech, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	37

LIST OF TABLES

Table	Page
1. Comparison of Normal and Clinic Family Groups on Several Composition Criteria.	21
2. Means and T Ratios for Total Number of Times Speaking, Normal versus Clinic Families. . .	25
3. Means and T Ratios for Total Duration of Speech, Normal versus Clinic Families. . . .	27
4. Means and T Ratios for Average Duration of Speech, Normal versus Clinic Families. . . .	28
5. Means and T Ratios for Number of Times Each Member of the Family Interrupts Another Member, Normal versus Clinic Families. . . .	30
6. Means and T Ratios for the Number of Times Each Family Member is Interrupted, Normal versus Clinic Families	32
7. Means and T Ratios for Total Number of Family Interruptions, Normal versus Clinic Families	34
8. Means and T Ratios for Total Number of Times Speaking, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother .	35
9. Means and T Ratios for Total Duration of Speech, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	36
10. Means and T Ratios for Average Duration of Speech, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	37

List of Tables (continued)

Table	Page
11. Means and T Ratios for Number of Interruptions by the Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	38
12. Means and T Ratios for Number of Times Interrupted, Normal Father versus Normal Mother; Clinic Father versus Clinic Mother	40
13. Means and T Ratios for Number of Instances of Simultaneous Speech, Normal versus Clinic Families	41
14. Means and T Ratios for Number of Double Messages Communicated, Normal versus Clinic . .	41
15. Means and T Ratios for Number of Times Interrupted Divided by Number of Times Speaking, Clinic Father versus Clinic Mother	42

LIST OF APPENDICES

Appendix	Page
A. Characteristics of Families Sampled in This Study.	58

PATTERNS OF COMMUNICATION IN
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INTRODUCTION

Statement of the Problem

The current trend in much psychological research is one that is moving away from the detailed study of the individual, and instead is moving toward the study of interpersonal relationships. This new approach has studied both ad hoc small groups and family interaction situations. This trend in research is paralleling a similar movement toward conjoint therapy techniques such as group therapy and family therapy. In the latter case, mother, father, problem child, and other siblings are often seen together by one therapist.

Concurrent with this move toward interaction research is a growing interest in communication theory; specifically its application to the study of interpersonal relationships. Ruesch, Block, and Bennett (1953)

state that the vast majority of terms used in psychiatry refer to the communicative behavior of patients. "All psychopathology can be viewed as a disturbance of communication." (p. 59) By focusing on communication we are describing observable ongoing events rather than the end products or end stages of processes.

Riskin (1963) describes the family as an ongoing system; one in which certain repetitive and enduring techniques or patterns of interaction are developed over time. These techniques are developed and maintained as a means of regulating the equilibrium of the family. He further states that the family's manner of communication will elucidate the underlying interactional patterns of behavior.

Farina and Dunham (1963) and others have shown that normal and abnormal families interact differently in similarly structured situations. If this is the case, an important step toward improved family treatment and diagnosis would be the precise delineation of the differences in interaction techniques exhibited by these two types of family units.

This study attempted to support the notion that normal and abnormal families differ significantly in their

patterns of communication as reflected in measures such as the number of times each family member speaks, duration of speaking, frequency of simultaneous speech, and number of interruptions. More specifically, it will be shown that the mother is the dominant member of the clinic family, while the father assumes this role in the normal family.

Relevant Literature

Jay Haley, a pioneer in communication and family interaction research, has stated that,

There are increasing attempts to classify and describe the functioning of married couples and families as well as ongoing groups in industry, military organizations, different psychotherapy situations, and other groups with a history. (1962, p. 265)

These new variables being studied are precisely those which older forms of psychological research tried to eliminate, i.e. interactional variables.

The crucial differences between families would seem to reside in the sorts of transactions which take place between family members; the study of differences becomes a classification of communications patterns in the family. (p. 267)

Haley suggests four basic assumptions of family study: (1) family members deal differently with each other than they do with other people, (2) the millions of responses which family members meet over time within a family fall into definite patterns, (3) these patterns persist within a family for many years and will influence a child's expectation of and behavior with other people when he leaves the family, and (4) the child is not a passive recipient of what his parents do with him, but an active co-creator of family patterns. For example, Bateson (1956) and Wynne (1958) have shown that families of schizophrenics have many similarities in common other than the schizophrenic behavior of one member. The way the parents deal with each other and with the children fall into certain basic patterns. The ultimate goal in family interaction research is to transfer these descriptive patterns into quantifiable variables that can be statistically measured, and then to use these findings in improving our therapeutic techniques. The first half of this goal is the purpose of the present study.

Haley goes on to say that the current trend is toward bringing families together and recording their interaction on tape and film. The study of communication

between people, however, is exceedingly difficult. People communicate not only with their words, but also with vocal inflections and certain specific non-verbal means such as bodily movements. Bateson, in the previously cited study, placed schizophrenic as well as non-schizophrenic families in a standard interview situation. His procedure included leaving the family alone to talk together, in order to note similarities and differences in response to the situation. This experiment was the prototype for many later studies in the field.

Experimentation with a family provides unique problems that go beyond those encountered in research both with individuals and artificial groups. When experimenting with individuals, it is customary to eliminate the influence of interpersonal factors. In the case of family research, exactly the opposite goal is desired: it is the interpersonal factor which is to be measured. Experimentation and testing of individuals involves the exposure of the subject to some nonhuman stimulus and the measurement of his response to it. For experimentation using groups, one must create a standard context and place two or more people within it while measuring their responses to each other. Then we must place two or more

other people involved in some different form of relatedness in the same situation and measure their responses.

Some clues to an adequate family research schema can be gained from the literature on small group experiments. There are, however, marked differences between these two types of interactional systems. The usual small group experiment consists of arranging a standard situation and placing several unrelated people in it. The effect of this particular context on their behaviors is then measured. The groups are carefully chosen so that the individual members are not acquainted. This is done in order to isolate the effects of the particular setting on their behavior. In a family interaction experiment the goal is quite different. Here the problem is to measure how the members of a "group with a history" typically respond to each other, while attempting to eliminate as much as possible the effects of the particular setting on their performance. A major problem in family experimentation is reducing the effects of the experimental situation on the typical patterns of interaction.

Haley, in a later article (1964), discusses some of the methodological issues of family interaction research.

He says that the ideal way to study a family system is to record it in operation. Numerous problems arise from such a procedure. The intended goal of this type of experimentation is to make reliable measurements of typical family interchanges while introducing as little bias as possible into the system being studied. Measuring the family in its natural habitat probably introduces the least amount of bias, but the measurements can only be the subjective reports of the experimenter. Placing families in structured situations so that their communication with each other is in some way restricted, for example limited to pushing buttons (Haley, 1962), can lead to accurate measurement of the interaction. However, such measurement is greatly affected by the difference between the experimental situation and the family's typical means of communication. Since family members normally communicate by conversation, it is most desirable to make measurements of that conversation. The ideal data in family interaction research should be the "recording of observable events which are accurately measurable, so that comparisons and contrasts can be made." (p. 42) Ideally there should be no guesswork or inference in the data itself,

even though the evaluation and interpretation of the data can, and often must, involve such inference. For example, the raw data may show that the mother in a clinic family speaks more often than the mother in a normal family. Such measurement involves no inference. The possible conclusion that the clinic family is mother-dominant and father-passive does indeed involve some inferential processes: that the number of times speaking is an index of dominance in the family, and that the experimental situation is representative of the normal patterns of communication that take place within the family.

In his 1964 study, Haley analyzed a sample of eighty families (40 normal and 40 clinic) borrowed from Ferreira and Winter's 1965 study. He scored the frequency of all possible sequences of "who speaks after whom." He then proposed answers to two basic questions. First, "can we demonstrate that the family is an organization following repetitive interactional patterns?" Haley showed this to be true by demonstrating that in all families, both normal and clinic, the variations of conversation sequences differed significantly from random expectations. The second question he posed was "can we on some scale differentiate

a disturbed family from a normal one?" He showed this to be possible by analyzing the patterned sequences of interaction for the two groups. He found that the normal families tended to make greater use of the possible interaction patterns than did the clinic families. In conclusion, Haley discussed data showing the effects of family therapy on the interaction patterns of the clinic families. After a number of therapy sessions, the clinic families showed a definite change toward the greater use of varied sequences of interaction.

The earliest studies of family interaction are those of Bishop (1951) and Moustakas, Sigel, and Schalock (1956). These experimenters limited their investigations to the direct observation of the mother-child dyad in a free play setting. A basic limitation of these studies was of course the omission of the effects of other family members on the particular dyad studied.

Strodtbeck (1951) began the serious study of husband-wife interaction patterns by developing the Revealed Differences Technique. He asked each couple to choose three families with whom they were familiar. He then separated the couple and had each spouse state which

of the three families best met each of twenty-six different criteria. He then brought the couple together and asked them to discuss and reconcile their differences. Strodtbeck made use of Bales' (1950) interaction categories and subsequently found that the partner who said the most tended to win more of the final decisions, while the partner who said the least generally passively agreed while making more overt signs of frustration and aggression. In a later study (1954), Strodtbeck made use of three member families: parents and adolescent sons. He obtained a series of disagreements from each member's response to alternative solutions to parent-son conflicts. Again using the Bales interaction analysis, he attempted to compare the power relations within the families to those of ad hoc groups. Strodtbeck found that families in obvious disagreement tried to give the experimenter the impression that they never really disagreed. There seems to be some relationship between this phenomenon and Wynne's (1958) description of pseudo-mutuality.

Follow-up studies using the concept of power were conducted by Farina (1960). He hypothesized that the characteristic interaction pattern of parents of schizophrenic patients is that of dominance of one over the

other to a greater extent than would be expected in the case of parents of non-schizophrenic offspring. His study demonstrated that the sex of the dominant parent and the pattern of adjustment of the son are also important variables. Farina made use of the structured situation test developed by Rodnick and Garmezy (1957), and he found that maternal dominance was related to poor premorbid adjustment of the schizophrenic son, and father dominance was related to a generally good premorbid adjustment. He used thirty-six pairs of parents divided into three groups of twelve each. Of the two experimental groups, one had sons characterized by isolation and asexuality, and the other had sons who had been married and had friends. The control group consisted of families whose sons were hospitalized for tuberculosis. Interaction analyses derived from indices of dominance and conflict led Farina to conclude that good premorbid patients had fathers who were more assertive than those of poor premorbids; and that the interactions of the parents of poor premorbids were generally characterized by more conflict and aggression than the interaction of the parents of good premorbid sons. Farina and Dunham (1963) studied the relationship between

the family and the patient's illness by including the schizophrenic son in the interaction. The findings were the same as in the earlier study. Farina and Dunham point out the necessity of establishing empirically valid scales of measurement that can be used to determine such descriptions as dominance and conflict. Truly meaningful research can only be carried out once such scales have been established.

Levinger (1959) used interaction patterns (scored by Bales' technique) with self-perceptual data from Leary's Interpersonal Checklist (1957). The tasks consisted of problem situations and joint TAT stories, and required the families to reach an agreement on solutions and interpretations. His results show that mothers in clinic families participated most often and also exhibited significantly more negative emotional behavior. This data lends support to the notion that a reversal of the normal male-female roles tend to have an adverse effect on the children. Levinger also found that marital satisfaction (low discrepancy score between each of the spouse's "real and ideal self" descriptions of their partner on the Interpersonal Checklist) was positively related to the partner's satisfaction with himself.

Ferreira (1963) continued the technique of using normal and pathological families. He had each member of the family reach a decision about three emotionally neutral items. Then he had the entire family try to reach a decision while considering the preferences of the individual members. He described four possible types of decisions: (1) unanimous decisions (family choice corresponded to the individual choice of every member), (2) majority decisions (family choice corresponded to the individual choice of two members), (3) dictatorial decisions (family choice was that of only one member's preference), and (4) chaotic decisions (family choice corresponded to none of the individual preferences). The results show that there is significantly more agreement in the normal families than in the pathological families. A later study by Ferreira (1965) used a larger sample to replicate the earlier findings and also added new variables. He found that his earlier results were repeated, that abnormal families took longer to reach a decision, and that they also showed a lower degree of appropriateness in their decisions than did normal families.

Fisher, Boyd, Walker, and Sheer (1959) compared the interaction approach with the individual approach in

family research. Parents of twenty normal, twenty neurotic, and twenty schizophrenic men were compared on measures assessing individual functioning as well as patterns of spouse interaction. As expected, the parents of the normal men were less disturbed than the parents of either of the two pathological groups. It was found, however, that only the interactional analysis differentiated the parents of neurotics from the parents of schizophrenics. As a result of these findings, the authors concluded that,

Schizophrenia results from the combined maladjustment of both parents as they interact with the child. If a husband and wife combined forces in a relatively congruent manner, they tended to compensate for their individual pathologies. (p. 165)

Framo makes the important point that the "lack of clarity in the communication between parents and between parent and child is more important in the etiology of schizophrenia than the amount of open parental disagreement and conflict." (p. 429)

Caputo (1963) provides us with a different type of comparison. He investigated the dominant-mother and passive-father notion in families with schizophrenic sons. He proceeded to demonstrate the superiority of direct observation of the interaction situation over the use of

paper-and-pencil tests. Using Osgood's Semantic Differential (1957) and the Parent Attitude Inventory, Caputo found relatively nonpathological interactional patterns for the parents of schizophrenic sons. However, when he used the Bales interaction analysis, he discovered a considerable degree of antagonism and hostility between the parents. These two studies give us a strong indication of the necessity of analyzing the ongoing interaction within families. Neither the assessment of individual members nor the use of paper-and-pencil measures of interaction is sufficient.

In a continuation of Haley's communication analysis, Lennard, Beaulieu, and Embrey (1965) studied the communication sequence in twenty 3-member families (ten normal and ten with a schizophrenic son). The families were required to discuss three topics such as "when a boy needs a helping hand with his homework, is it better for the mother or father to help out?" Sequential analysis of the interactions revealed that significantly less communication flowed from son to father and vice versa in the case of the abnormal families. This was also true for mutual communication between mother and father. These results

lend further credence to the idea of the passive-father and dominant-mother in schizophrenic families.

Riskin (1963 and 1964) used skilled clinicians to rate family members' speeches on several dimensions: communication clarity, topic shifts, agreement with previous speeches, and affective intensity. When an experienced clinician then listened to the previously rated tapes he missed a significantly large amount of detail that was obtained by microscopic analysis. Thus we can see the importance of restricting our investigations to easily specifiable and concrete variables.

Moore (Ph.D. dissertation, 1966) added the longitudinal dimension to the study of interaction in normal and clinic families. He posed two hypotheses: 1) judges' ratings of family interaction observed in the standard interview would be relatively similar in two interaction sessions ten weeks apart, and 2) these interaction ratings would reveal differences between the normal and clinic families. He utilized trained raters to score each family on the Family Rating Scale developed at Michigan State University. The families were required to perform various tasks including planning an activity, discussion of desired

changes within the family, and discussion of problem situations. Moore found that normal families could be differentiated from clinic families by an overall pathology score and on a number of items on the Family Rating Scale. In comparison to the clinic families, the normal families were characterized by more inter-member agreement, a greater capacity for reaching common decisions in an equalitarian fashion, less overall anger but greater tolerance of individual independence in thought and action, more interpersonal warmth, less manifest tension, and a greater degree of happiness. Both parents in the normal family displayed more overall satisfaction and effectiveness within their various roles. Regarding consistency, he found that "there exists a core of interaction consistency over time for both experimental groups." (p. 57) This finding lends support to the notion of permanence in family interaction patterns. An unexpected finding showed that normal families were rated as significantly less pathological after the second interview, while no such differences were found for the clinic families. This result may show a basic difference between normal and clinic families: that of being able to profit from experience

and perfect smoother ways of carrying out experimental tasks when encountered for a second time.

METHOD

Subjects

Tape recordings of the family interaction sessions recorded by Marv Moore (1966) were used. The families for the study consisted of four or five member units (both parents and two or three children) all meeting the following criteria: 1) every family lived together for at least four uninterrupted years previous to participation in the research, 2) children ranged in age from eight to seventeen, 3) all families included at least one male child between the ages of eight and thirteen, and 4) they met the criteria listed below for inclusion in one of the two experimental groups.

The normal group consisted of eight families none of whose members had ever received or was recommended to receive any type of psychiatric treatment for an emotional or nervous disorder. Normal families were obtained from two sources. Three families volunteered as a result of a call for subjects at local labor union meetings, and five

volunteered after being recommended by their minister as representing the "most emotionally mature" families in his congregation. For their cooperation all normal families received \$10 for each of two interviews. The clinic group consisted of seven families waiting for psychotherapy at the Michigan State University Psychological Clinic. No family received any treatment during the course of the experiment. All families initially contacted the clinic because a male child between the ages of eight and thirteen had been referred for underachievement and/or lack of behavior control in school. The clinic families received no remuneration for their part in the project, because participation in ongoing research was part of the treatment agreement.

Moore used a total of sixteen families in his study (eight normal and eight clinic), but due to an incomplete collection of recordings only eight normal and seven clinic families were used in the present study. Table 1 shows that the two groups are essentially the same in composition except for the mean level of fathers' education which was 1.2 years higher for the clinic sample. This difference was not significant. Complete breakdowns of characteristics of each family are shown in Appendix A.

Table 1.--Comparison of Normal and Clinic Family Groups on Several Composition Criteria

Family	Mean years of completed education		Mean number of children per family	Mean age of children per family
	<u>Father</u>	<u>Mother</u>		
Normal	12.8	12.2	2.3	10.6
Clinic	14.0	12.1	2.6	10.4

Interviewing Procedure

At the beginning of each interview, each family was told that they would be observed by two raters through a one-way mirror, and that the purpose of the experiment was to increase our skills in helping families. Preliminary remarks before the actual session began were designed to put the family at ease. Although Moore used nine separate experimental tasks, the present study focused only on the first three.

Task 1: The interviewer saw each family member separately just long enough to ask him the following

question: "At this point in time what changes would you like to see made in your family, as a whole or in any particular members?" While the experimenter received this information, the remaining family members waited in an adjoining room with instructions not to discuss the question among themselves. After each member had been seen, the family met as a whole in the experimental room, and was then asked to carry out the following instructions: "Discuss among yourselves the question I have just asked each of you separately. You may discuss any aspect of the question you wish. The only specific request I make is that at some point you talk about specific steps you might take as a family to bring about any of the desired changes. You will have about four minutes, or more if you need it. I will not take part in your family discussion, but will remain quietly in the room." It was at this point that the rating in the current study began.

Task 2: The entire family was instructed: "Plan an activity you could all do together; it should be something you might actually do. I will leave the room for four or five minutes. Choose one person to summarize your plans for me when I return."

Task 3: The parents received the following proverb: "While the cat's away the mice will play." The experimenter asked them to discuss this proverb and then to plan how they would teach it to their children. Upon the parents' request, the interviewer brought the children back into the room and they were taught the proverb. The rating for this study began once the parents started teaching the proverb to the children.

Rating Procedure

The tapes were scored for the following items: 1) total number of times each family member spoke, 2) total length of time each family member spoke, 3) average duration of speech for each family member, 4) total number of times any one family member interrupted another, 5) number of times each family member was interrupted, 6) number of instances of simultaneous speech (two or more family members speaking at once), 7) total number of double messages communicated. The two temporal measures were obtained by using a stop watch and were calculated in seconds. Totals and means were derived for each of the three

experimental tasks as well as overall means and totals (across tasks). Due to the difficulty of determining which child was speaking, the data for all children in each family were combined for these analyses. There were a total of eighteen children in each experimental group. The data for double messages were the combined scores of two raters, as this particular variable was also part of another study carried on concurrently using the same sample. Interrater reliability was .89, as measured by the Pearson r .

The rater did not know whether the family being rated was a normal or clinic family. This information was available only for the purposes of data analysis.

RESULTS

The first hypothesis stated that there would be a significant difference between normal and clinic families in the total amount of time that each family member spoke. Means and t ratios are presented in Table 2.

Table 2.--Means and t Ratios for Total Number of Times Speaking, Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Father:				
Task 1:	11.3	8.4	1.02	.20
Task 2:	31.4	18.0	2.20	.05
Task 3:	17.9	7.7	2.96	.02
Overall:	60.6	34.1	3.03	.01
Mother:				
Task 1:	5.2	12.3	4.01	.01
Task 2:	15.6	23.4	2.30	.03
Task 3:	5.5	10.6	1.61	.10
Overall:	26.3	46.3	3.13	.01

Table 2 (continued)

Variant	Normal	Clinic	T ratio	P level
Children:				
Task 1:	15.0	17.6	1.79	.10
Task 2:	27.3	32.7	2.25	.05
Task 3:	9.8	10.8	1.03	.40
Overall:	52.1	61.1	2.27	.05

The results show that the normal father speaks more often than the clinic father, with all t ratios except for task 1 significant at least at the .05 level. The clinic mother speaks more often than the normal mother with all t ratios except for task 3 significant at least at the .05 level. Clinic children speak more often than normal children with only task 2 and overall means significantly different at the .05 level.

The second hypothesis stated that there would be a significant difference between normal and clinic families in the total duration of speaking time for each member. Means and t ratios are shown in Table 3.

Table 3.--Means and t Ratios for Total Duration of Speech,
Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Father:				
Task 1:	54.9	44.7	1.01	.20
Task 2:	78.3	66.0	1.31	.20
Task 3:	48.9	32.3	1.75	.10
Overall:	182.1	143.0	3.15	.01
Mother:				
Task 1:	22.9	55.4	3.25	.01
Task 2:	50.4	65.9	1.69	.10
Task 3:	30.0	44.1	1.54	.20
Overall:	103.3	165.4	5.68	.001
Children:				
Task 1:	21.6	48.9	3.03	.01
Task 2:	63.6	100.6	3.25	.01
Task 3:	32.5	40.3	2.37	.05
Overall:	117.7	189.8	4.89	.001

The results show that the normal father speaks for a greater length of time than the clinic father, with only the overall t ratio significant at the .01 level. Although not reaching this level, differences for the three tasks are all in the expected direction. The clinic mother speaks for a greater length of time than the normal mother, with t ratios on task 1 and overall significant at least at the .05 level. Again, tasks 2 and 3 show differences in the expected direction. Clinic children speak for a greater length of time than normal children, with all t ratios significant at least at the .05 level.

The third hypothesis stated that there would be a significant difference between normal and clinic families in the average duration of speaking time for each member of the family. Means and t ratios are shown in Table 4.

Table 4.--Means and t Ratios for Average Duration of Speech,
Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Father:				
Task 1:	7.6	4.1	2.47	.05

Table 4 (continued)

Variant	Normal	Clinic	T ratio	P level
Task 2:	3.4	4.0	No Difference*	
Task 3:	8.9	4.5	2.67	.02
Overall:	19.9	16.6	2.26	.05
Mother:				
Task 1:	4.5	6.1	1.09	.30
Task 2:	3.1	6.3	1.12	.30
Task 3:	7.9	10.9	1.55	.20
Overall:	15.5	23.3	2.44	.05
Children:				
Task 1:	3.2	2.8	No Difference	
Task 2:	2.4	5.1	1.26	.30
Task 3:	4.3	4.5	No Difference	
Overall:	9.9	12.4	1.31	.30

*For all tables, "No Difference" means a t ratio with a probability greater than .50.

It can be seen from Table 4 that the normal father speaks significantly longer each time he speaks than does the clinic father, with all t ratios except task 2 significant

at least at the .05 level. The clinic mother speaks longer each time she speaks than does the normal mother with only the overall t ratio significant at the .05 level. Differences for the three tasks are in the expected direction. Clinic children tend to speak for longer average durations in task 2 and overall. Neither t ratio is significant at the .05 level.

The fourth hypothesis is that there will be a significant difference in the number of times each member of the family interrupts another when normal and clinic families are compared. Means and t ratios are shown in Table 5.

Table 5.--Means and t Ratios for Number of Times Each Member of the Family Interrupts Another Member,
Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Father:				
Task 1:	0.62	1.00	1.75	.20
Task 2:	1.25	2.30	2.60	.02
Task 3:	0.63	1.75	2.18	.05
Overall:	2.50	5.05	2.21	.05

Table 5 (continued)

Variant	Normal	Clinic	T ratio	P level
Mother:				
Task 1:	0.00	1.00	2.86	.02
Task 2:	0.88	1.30	1.09	.30
Task 3:	0.38	0.71	1.27	.20
Overall:	1.26	3.01	2.62	.03
Children:				
Task 1:	0.38	1.70	2.20	.05
Task 2:	2.40	5.10	2.25	.05
Task 3:	0.25	1.40	1.25	.30
Overall:	3.03	8.20	3.14	.01

The results show that the clinic father interrupts more often than the normal father, with only the task 1 t ratio failing to reach the .05 level of significance. The clinic mother interrupts more often than the normal mother, with task 1 and overall t ratios significant at least at the .05 level. Tasks 2 and 3 show differences in the expected direction. Clinic children interrupt more often than normal

children, with only the task 3 t ratio failing to reach the .05 level of significance.

The fifth hypothesis is that there will be a significant difference in the number of times each family member is interrupted by another family member when normal and clinic families are compared. Means and t ratios are shown in Table 6.

Table 6.--Means and t Ratios for the Number of Times Each Family Member is Interrupted, Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Father:				
Task 1:	0.38	0.14	No Difference	
Task 2:	1.60	3.00	1.51	.20
Task 3:	0.00	0.58	1.49	.20
Overall:	1.98	3.72	1.56	.20
Mother:				
Task 1:	0.37	1.10	1.28	.30
Task 2:	1.50	1.60	No Difference	
Task 3:	0.50	0.60	No Difference	
Overall:	2.37	3.30	1.39	.20

Table 6 (continued)

Variant	Normal	Clinic	T ratio	P level
Children:				
Task 1:	0.38	1.70	2.27	.05
Task 2:	1.40	4.90	3.93	.01
Task 3:	0.75	1.90	1.26	.30
Overall:	2.53	8.50	4.65	.001

Comparisons between normal fathers and clinic fathers, and normal mothers and clinic mothers regarding number of times they are interrupted show no t ratios to be significant at the .05 level. The trend in both cases, however, seems to be toward a greater number of times interrupted in the clinic families. Clinic children are interrupted significantly more often than normal children, with all t ratios except task 3 significant at the .05 level at least.

The sixth hypothesis is that there will be a significant difference in the total number of family interruptions in the clinic and normal families. Means and t ratios are shown in Table 7.

Table 7.--Means and t Ratios for Total Number of Family Interruptions, Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Task 1:	1.00	3.70	2.27	.05
Task 2:	4.53	9.60	2.73	.02
Task 3:	1.25	2.86	1.84	.10
Overall:	6.78	16.16	2.89	.02

The results indicate that the clinic families exhibit a greater number of total interruptions than do normal families, with all t ratios except task 3 significant at least at the .05 level.

Hypothesis seven states that there will be significant difference in the total number of times speaking for the normal father compared to the normal mother; and the clinic father compared to the clinic mother. Means and t ratios are presented in Table 8. It can be seen from the results that the normal father speaks significantly more often than the normal mother, with all t ratios significant at least at the .05 level. Clinic mothers speak significantly more often than clinic fathers, with all t ratios

Table 8.--Means and t Ratios for Total Number of Times
Speaking, Normal Father versus Normal Mother;
Clinic Father versus Clinic Mother

Variant	Normal Father	Normal Mother	T ratio	P level
Task 1:	11.3	5.2	2.19	.05
Task 2:	31.4	15.6	3.07	.01
Task 3:	17.0	5.5	3.24	.01
Overall:	60.6	26.3	3.69	.001
	Clinic Father	Clinic Mother		
Task 1:	8.4	12.3	2.33	.05
Task 2:	18.0	23.4	2.71	.02
Task 3:	7.7	10.6	2.85	.02
Overall:	34.1	46.3	2.69	.02

also significant at least at the .05 level. These findings seem to indicate the reversal of the "normal" male-female role relationship in the clinic family.

Hypothesis eight states that there will be a significant difference in the total duration of speech of the normal father compared with the normal mother; and the

clinic father compared with the clinic mother. Means and t ratios are presented in Table 9.

Table 9.--Means and t Ratios for Total Duration of Speech,
Normal Father versus Normal Mother;
Clinic Father versus Clinic Mother

Variant	Normal Father	Normal Mother	T ratio	P level
Task 1:	54.9	22.9	2.34	.05
Task 2:	78.3	50.4	3.11	.01
Task 3:	48.9	30.0	3.07	.01
Overall:	182.1	103.3	6.26	.001
	Clinic Father	Clinic Mother		
Task 1:	44.7	55.4	2.17	.05
Task 2:	66.0	65.9	No Difference	
Task 3:	32.3	44.1	2.54	.05
Overall:	143.0	165.4	2.74	.02

The results show that the normal father speaks for a longer time than does the normal mother. All t ratios are significant at least at the .05 level. The clinic mother speaks for a longer amount of time than does the normal mother,

with all t ratios except task 2 significant at least at the .05 level.

Hypothesis nine states that there will be a significant difference in the average duration of speech for the normal father compared with the normal mother; and the clinic father compared with the clinic mother. Means and t ratios are shown in Table 10.

Table 10.--Means and t Ratios for Average Duration of Speech,
Normal Father versus Normal Mother;
Clinic Father versus Clinic Mother

Variant	Normal Father	Normal Mother	T ratio	P level
Task 1:	7.6	4.5	1.4	.20
Task 2:	3.4	3.1	No Difference	
Task 3:	8.8	7.9	No Difference	
Overall:	19.9	15.5	1.17	.30
	Clinic Father	Clinic Mother		
Task 1:	4.1	6.1	1.89	.10
Task 2:	4.0	6.3	1.84	.10
Task 3:	4.5	10.9	2.23	.05
Overall:	16.6	23.3	3.75	.01

It appears that there is no significant difference in average duration of speech for the normal parents. Task 1 and overall t ratios show a trend toward the normal father speaking longer each time he speaks. The clinic mother's average duration of speech is significantly longer in task 3 and overall, with t ratios significant at least at the .05 level. Tasks 1 and 2, although not significant at the .05 level, are in the expected direction.

The tenth hypothesis states that there will be a significant difference in the number of times the normal father interrupts another family member compared with the normal mother; and the clinic father compared with the clinic mother. Means and t ratios are presented in Table 11.

Table 11.--Means and t Ratios for Number of Interruptions
by the Normal Father versus Normal Mother;
Clinic Father versus Clinic Mother

Variant	Normal Father	Normal Mother	T ratio	P level
Task 1:	0.62	0.00	No Difference	
Task 2:	1.25	0.88	No Difference	
Task 3:	0.63	0.38	No Difference	
Overall:	2.50	1.26	No Difference	

Table 11 (continued)

Variant	Clinic Father	Clinic Mother	T ratio	P level
Task 1:	1.00	1.00	No Difference	
Task 2:	2.30	1.30	2.47	.05
Task 3:	1.75	0.71	1.39	.20
Overall:	5.05	3.01	2.20	.05

The results show no difference in the number of times the normal father interrupts compared with the number of times the normal mother interrupts. The clinic father interrupts more often than the clinic mother, with t ratios for task 2 and overall significant at the .05 level. The ratio for task 3 is in the expected direction.

Hypothesis eleven states that there will be a significant difference in the number of times the normal father is interrupted compared to the normal mother; and the clinic father compared to the clinic mother. Means and t ratios are presented in Table 12. The results show no difference in the number of times the normal father is interrupted compared to the normal mother. The clinic mother is interrupted more often than the clinic father, with all t ratios except task 3 significant at least at the .05 level.

Table 12.--Means and t Ratios for Number of Times Interrupted, Normal Father versus Normal Mother;
Clinic Father versus Clinic Mother

Variant	Normal Father	Normal Mother	T ratio	P level
Task 1:	0.38	0.37	No Difference	
Task 2:	1.60	1.50	No Difference	
Task 3:	0.00	0.50	No Difference	
Overall:	1.98	2.37	No Difference	
	Clinic Father	Clinic Mother		
Task 1:	0.14	2.10	2.66	.02
Task 2:	1.12	3.60	2.19	.05
Task 3:	0.58	0.60	No Difference	
Overall:	1.84	6.30	3.76	.01

Hypothesis twelve states that there will be a significant difference in the number of instances of simultaneous speech when normal and clinic families are compared. Means and t ratios are shown in Table 13. The results show that the clinic families demonstrate a greater incidence of simultaneous speaking than do normal families. All t ratios are significant at least at the .05 level.

Table 13.--Means and t Ratios for Number of Instances of
Simultaneous Speech, Normal versus
Clinic Families

Variant	Normal	Clinic	T ratio	P level
Task 1:	0.50	2.10	2.22	.05
Task 2:	2.00	3.70	2.17	.05
Task 3:	0.25	2.10	2.69	.02
Overall:	2.75	7.90	3.07	.01

Hypothesis thirteen is that there will be a significant difference in the number of double messages communicated when normal and clinic families are compared. Means and t ratios are presented in Table 14.

Table 14.--Means and t Ratios for Number of Double Messages
Communicated, Normal versus Clinic Families

Variant	Normal	Clinic	T ratio	P level
Task 1:	.06	.79	No Difference	?
Task 2:	.06	.36	2.50	.05
Task 3:	.06	.00	No Difference	
Overall:	.18	1.15	3.03	.01

The results show that the clinic families communicate more double messages than do normal families, with t ratios for task 2 and overall significant at least at the .05 level.

The fourteenth hypothesis is that the difference in the number of times interrupted for the clinic father and clinic mother will remain when interruptions are divided by number of times speaking. Means and t ratios are presented in Table 15.

Table 15.--Means and t Ratios for Number of Times Interrupted Divided by Number of Times Speaking,
Clinic Father versus Clinic Mother

Variant	Clinic Father	Clinic Mother	T ratio	P level
Task 1:	.04	.29	2.25	.05
Task 2:	.11	.34	2.39	.05
Task 3:	.01	.13	2.19	.05
Overall:	.16	.76	3.31	.01

The results show that the hypothesis is confirmed, with all t ratios significant at least at the .05 level.

DISCUSSION

The results obtained from this study show that when normal and clinic families are placed in identical situations and are asked to perform the same tasks, clear differences in their manner of communication can be demonstrated. The implications of this very broad statement are exceedingly important and will be discussed later. More specifically, certain basic differences in the interactive styles of the two groups of families are suggested. The results may be broken down into two basic areas: who is the dominant member of the family, and clarity of communication between family members.

The problem of dominance within the family is a complex one to discuss. Much of the literature presented in the introduction to this paper dealt with the reversal of the customary father-mother role relationship in the families of disturbed children. Most of these earlier studies utilized families that included a schizophrenic child or young adult. These studies showed the dominant-mother and passive-father relationship to be the typical

pattern in the schizophrenogenic family. The results of the present study show that the clinic mother speaks more often, for a greater total length of time, and longer on the average than does the clinic father. Such concrete measures of interactive and communicative styles can be extended in meaning to indicate the nature of dominance and submission in the family. If we can assume that these measures of speaking time and frequency are indications of dominance, which this experimenter and others have done, then the results seem to indicate the reversal of mother-father roles in the family extends beyond the schizophrenic families, and includes families whose sons are underachievers and/or behavior problems in school. This result points the way to further research in the area of family interaction. Different pathological families need to be rated using the same techniques to determine whether this role reversal is common to all types of abnormal families, and if so, why the reversal produces adverse effects on the children of these families.

In the case of the normal family, a definite pattern of dominance is also demonstrated, but it seems to be less clear-cut than in the clinic family. The normal father

speaks more often and for a greater total length of time than does the normal mother, but their average duration of speech is approximately the same. This result might tend to indicate a more democratic power relationship in the normal family than is the case in the clinic family. This tentative conclusion is in line with those of earlier work in the field.

The data regarding the number of interruptions and number of times interrupted reveal further important differences between the two groups of families, and it also gives us an indication of how the two groups accept the prevailing conditions of dominance and submission. The clinic father interrupts more often than the normal father, perhaps in an attempt to "fight" his passive position in the family. The clinic mother, in spite of her apparent dominant position, interrupts more often than the normal mother. It seems as if the clinic mother must constantly struggle to maintain her dominant position, while the normal mother is content with her respective role in the family hierarchy. The normal father and normal mother are interrupted the same number of times in spite of the fact that the normal father speaks for a greater total length

of time and more often. The clinic mother, on the other hand, is interrupted more often than the clinic father even when differences in number of times speaking are equated. Again, we see a dissatisfaction in the clinic family regarding the relative positions of the family members.

The data comparing normal and clinic children are just as revealing. Results show that the clinic child speaks more often and for a greater length of time than does the normal child. However, there is little difference in the average duration of speech for the two groups of children. Interruption data show that the clinic child is interrupted more often and interrupts more often than the normal child. It seems as though the clinic child must interrupt in order to have his views considered by the family. He may also be more involved in the conflict between the parents.

In conclusion, we see that the father is the dominant member of the normal family, and this dominant role is accepted by the other members of the family. The clinic mother, on the other hand, appears to be the dominant member of the clinic family on the basis of speaking time and frequency of speaking. However, the interruption data shows

that this state of affairs is not acceptable to the other members of the family, and that the clinic mother must continually exert herself in order to maintain her unstable position of dominance. Caputo's (1963) study showed that paper-and-pencil techniques of assessment are not sufficient to gain an accurate picture of the interactive styles of families. In a similar manner, the present study suggests that one or two measures of dominance alone are equally lacking when trying to present the total picture of family interaction. Future research must make use of multiple measures of significant variables in order to be most meaningful.

The second major area of difference between the two groups of families is the clarity of communication between family members. Studies cited earlier showed that the clinic families exhibited less communication clarity, less inter-member agreement, and fewer democratic decisions than did normal families. The results from the present study add support to these findings in a number of ways. The clinic families show a significantly greater number of instances of simultaneous speaking than do normal families. This finding lends credence to earlier results showing

greater amounts of conflict and less communication clarity in clinic families. The members of the clinic families seem less able to follow democratic techniques in reaching family decisions. The interruption data add further evidence of this inability to reach democratic decisions. The clinic family exhibits a significantly greater number of total interruptions than does the normal family. The clinic family also communicates a significantly greater number of double messages than is the case for the normal family.

These findings seem to reveal an interrelationship that is quite important. An unacceptable power hierarchy and a comparatively large number of double messages may lead to a high incidence of interruptions and simultaneous speech. Only in this way can the members of the clinic family attempt to make their preferences known. Once the democratic process breaks down (as seems to be the case in the clinic family), individual members must resort to disruptive techniques in order to gain a voice in family decisions. Once the necessity of interruptions is established, a vicious circle is begun in which one interruption leads to another, with the breakdown in communication as the net result.

The results of the present study give us some indication of what led the abnormal family to seek help at the clinic. From the data we see that there tends to be more conflict and fewer means of resolving these conflicts because of the breakdown in communication in the clinic families. Moore's (1966) data revealed that the normal families showed a greater tolerance for independence in thought and action than did the clinic families. One might conclude that the children, who are most susceptible to the adverse effects of the pathological interactive style of the clinic family, must seek alternative ways of expressing themselves. The inability of the clinic family to tolerate the independence strivings and attempts at self-expression of the children, forces the child to make these attempts in the school setting. This particular situation may be as rigid and constricting as the clinic family and the child's behavior may be seen as more inappropriate there, thus leading to the child being referred to the clinic as a behavior problem. This interpretation can only be a tentative one until further research can show a correlation between the specific problem of the child, and its relation to the interactive style of the family in which he is raised.

We may now return to the broad statement made earlier regarding the clear demonstration of differences in the communicative styles of the two groups of families. The implications of such a demonstration are crucial to the area of family interaction research, diagnostics, and therapy. The present study is really only one of many pilot studies that are indicating that much work needs to be done in this area in order to gain a full understanding of the dynamics of family interaction. These many and varied studies have shown that normal and clinic families can be differentiated on a number of variables ranging from aspects of communication to techniques of decision-making. The research, however, cannot end here. Once the critical variables have been isolated, the job becomes one of applying these variables to diagnostic work in family treatment clinics and to perfecting our therapeutic techniques. Haley's (1964) pilot work on teaching clinic families to clarify and broaden their scope of communication among the members of the family is such an attempt. Only when our strictly theoretical findings can be translated into techniques of helping families will the true goal of family interaction research be reached.

SUMMARY

This study was undertaken to determine whether normal and deviant families could be differentiated on the basis of their communicative interaction. Concrete measures such as number of times each family member spoke, total length of time each member spoke, average duration of speech, number of interruptions, frequency of simultaneous speech, and number of double messages communicated were employed. Eight normal and seven abnormal families (four or five members each) whose interactions were recorded by Moore (1966) were used. Normal families had no history of psychiatric disorder and were obtained through labor union and church groups. Deviant families had been referred to the Michigan State Psychological Clinic because a male child between the ages of eight and thirteen was an underachiever and/or behavior problem in school. No clinic family received any treatment during the course of the experiment.

It was hypothesized that the two groups of families would show significant differences on the above stated variables. Further, differences were expected between father and mother within the same family. More specifically, normal fathers spoke more often, for a greater total length of time, and for a longer average duration than clinic fathers. Clinic mothers showed the same pattern when compared with normal mothers. Clinic children spoke more often and for a greater total length of time than normal children, whereas average duration of speaking time was approximately the same. Normal families showed fewer interruptions, fewer instances of simultaneous speaking, and fewer numbers of double messages than did the clinic families.

Comparisons within families revealed that the normal father spoke more often and for a greater total duration than normal mothers, while average duration of speech was equivalent. Clinic mothers spoke more often, for a greater total length of time, and for a longer average duration than did clinic fathers. Interruption data showed that there were no differences between the normal father and the normal mother. In the clinic families, the father interrupts more often than the mother. There is no difference in the number

of times the normal father and mother are interrupted, while the clinic mother is interrupted more often than the clinic father. The latter difference is maintained even when number of times speaking is held constant.

The results led the author to infer patterns of dominance and submission in the two groups of families. The normal family is characterized by father-dominance which appears to be accepted by the other members of the family. The clinic family is characterized by mother-dominance when frequency and temporal measures of speaking are considered. However, data on interruptions suggest that this is a relatively unstable power hierarchy which leads to a recurring struggle on the part of the mother to maintain her position.

Finally, the effects of a pathological style of interaction on the children, and directions for future research are discussed.

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APPENDIX

APPENDIX

Characteristics of families sampled in this study; families 1-8 are the normal group and families 9-15 are the clinic group

Family Number	Father		Mother		Children	
	Occupation	Education	Occupation	Education	Sex	Age
1	Tool & Die Maker	12	Housewife	12	M	11
					M	14
2	IBM Programmer	14	Housewife	14	M	5
					M	9
3	Personnel Director, Mich. Dept. of Social Service	12	Housewife	12	M	7
					M	7
					F	12
4	Labor Union Leader	12	Housewife	12	M	8
					M	9
					F	11
5	Bricklayer	12	Housewife	12	M	10
					F	15
6	Accountant	16	Housewife	12	M	12
					M	17
7	Postal Clerk	12	Secretary	12	M	12
					F	16
8	Insurance Salesman	12	Housewife	12	F	7
					M	9

Appendix (continued)

Family Number	Father		Mother		Children	
	Occupation	Education	Occupation	Education	Sex	Age
9	Machinist	12	Housewife	12	M	7
10	Graduate Student	17	Housewife	13	M	10
					F	9
					M	12
11	Pet Store Manager	15	Housewife	12	M	8
					M	12
12	Mechanical Engineer	17	Housewife	14	M	8
					M	12
13	Cartographer	13	Housewife	11	M	7
					F	12
					M	14
14	Graduate Student	16	Secretary	12	M	8
					M	12
					M	15
15	Factory Worker	12	Housewife	12	M	7
					F	8
					M	9

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