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Family Interaction Studies and the Etiology of Schizophrenia

Kenneth Eugene Kirby

College of William & Mary - Arts & Sciences

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FAMILY INTERACTION STUDIES AND

THE ETIOLOGY OF SCHIZOPHRENIA

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A Thesis
Presented to
The Faculty of the Department of Sociology
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree of

Master of Arts

_________________________

by
Kenneth E. Kirby
1973
APPROVAL SHEET

This thesis is submitted in partial fulfillment of the
requirements for the degree of

Master of Arts

Author

Approved,

R. Wayne Kernodle
R. Wayne Kernodle

Lawrence S. Beckhouse
Lawrence S. Beckhouse

Marion G. Vanfossen
Marion G. Vanfossen
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ABSTRACT

The purpose of this study is to evaluate the theoretical and methodological adequacy of family interaction studies conducted concerning the etiology of schizophrenia which were published in English from 1934 through 1969. "Medical model" approaches to discovering the etiology of schizophrenia are also described and critiqued. The inconclusive findings and theoretical and methodological inadequacies of the "medical model" approaches are described in an effort to support the author's contention that a more sociological approach such as family interaction investigations may have great etiological potential.

The careful review and analysis of those family interaction studies published from 1934 through 1969 have revealed that the great majority of these studies are based upon tenuous theoretical assumptions and are methodologically inadequate according to the various criteria of methodological adequacy which are accepted by most social scientists.

The nature of these theoretical and methodological weaknesses are described in a detailed manner. A summary and critique of each of the studies published from 1934 through 1969 is presented in order to document and clearly illustrate the weaknesses described.

The final chapter offers suggestions concerning: (1) needed improvements in the "typical" family interaction research design; (2) new directions in research which would complement the typical family interaction research approach; and (3) new types of research designs which should be utilized by family interaction researchers.
FAMILY INTERACTION STUDIES AND
THE ETIOLOGY OF SCHIZOPHRENIA
INTRODUCTION

Even until the present, the cause or causes of what is termed schizophrenia have not been conclusively isolated. With the exception of the past two decades, etiological studies have been primarily conducted by geneticists, biochemists, and physiologically oriented psychiatrists and psychologists. These research efforts have been conducted within what Scheff (1966) has termed the "medical model" perspective. This perspective is based on the assumption that the primary cause of schizophrenia originates from within the individual. For example, psychiatrists have attempted to resolve various libidinal conflicts within the individual's psyche while other researchers have worked to isolate a "gene" specific for schizophrenia or some chemical imbalance within the disordered "organism." Efforts such as these usually give little attention to extra-individual factors such as one's social experiences in various types of social environments -- past and present.

During the past four decades many research efforts concerning the etiology of schizophrenia have moved away from the somewhat narrow medical model approach and have adopted a more sociological perspective. These efforts, often termed social-psychological in that the impact of the social situation upon the personality of the subject is analyzed, have manifested themselves in the form of what are generally termed "family interaction studies."
Family interaction studies are usually one of two types. One approach is to gather information concerning attitudinal and behavioral characteristics of the parents (often called "trait" studies) and determine how such factors have influenced the personality development of the schizophrenic offspring during parent-child interaction. The second approach is to analyze the family as a small group characterized by certain interaction sequences which have consequences for the mental well-being of each family member.

Generally, family interaction studies attempt to associate the incidence of schizophrenia with certain interpersonal and interactional characteristics of the subject's immediate family.

This paper is concerned with these family interaction studies. It is the thesis of this paper that the great majority of family interaction studies published through 1969 are based on a tenuous theoretical foundation and are methodologically inadequate according to the methodological standards held by most sociologists and scientists in general. These studies generally have not fulfilled

1These methodological standards are delineated in any widely accepted sociological text concerning methodology such as Bonjean et al. (1967), Blalock and Blalock (1968), Campbell and Stanley (1963), Lazarsfeld and Rosenberg (1955), Miller (1964), and Sjoberg and Nett (1968). Standard methodological criteria for an adequate scientific endeavor of this nature include, for example, these items: (1) construction of control groups well watched concerning major demographic and sociological variables; (2) clear description of the demographic and sociological characteristics (e.g. age, sex, socioeconomic level, occupation, religion, ethnic identity, place of residence, and level of educational achievement) of the subjects under study; (3) use of reliable and valid data gathering instruments and techniques; (4) clear description of the data analysis procedures; (5) the absence of selective factors which may bias the construction of the study and control groups; (6) absence of experimenter bias and non-objectivity in the research procedures; and (7) clear admission by the researchers of basic weaknesses in their research design and procedures.
the expectations of many researchers in that they, like other approaches to this problem, have not as of yet been able to isolate the etiological factor or factors associated with the incidence of schizophrenia. This thesis is the result of a careful reading and analysis of 138 purported family interaction studies dealing with adult or late adolescent schizophrenics which were published from 1934 through 1969. (See Appendix A for a complete listing of these studies.)

Note the use of the word "purported" here. This writer gathered references of what various researchers termed "family interaction studies." This was accomplished by analysis of literature reviews; bibliographic guides and listings; journal articles, indices, and abstracts; and dissertation articles, indices, and abstracts. Upon examination of these "studies," however, it was discovered that 15 of these articles were not really studies at all -- but were theoretical presentations instead. These fallaciously termed "studies" are included in the cited figure of the 138 articles reviewed in the process of this investigation. What is disturbing here is that many researchers refer to these articles as "studies" which "produced" certain findings. Such statements give readers inaccurate impressions of the degree and nature of the empirical evidence available.

Another note of clarification is in order here. In the course of this investigation considerable evidence\footnote{See Eisenberg (1968), Hinsie and Campbell (1970:78, 681), Kety (1969), Meyers and Goldfarb (1962), National Institute of Mental Health: Center for Studies in Schizophrenia (1971:24, 25), Singer and Wynne (1963), and Wynne and Singer (1936b).} was discovered that
"childhood schizophrenia" and "autism" are disorders quite different in kind and degree from "adolescent" or "adult" schizophrenia. Therefore, it is problematic that 20 of the studies reviewed used autistics or childhood schizophrenics as their index subjects while the other studies used late adolescent or adult schizophrenics. The lumping together of findings based on the study of different types of patients is an error of major proportions. Therefore, it was the decision of this writer to evaluate only those studies which used adolescent or adult schizophrenics as the index subjects. This decision was based on the fact that the great majority of the studies reviewed did use such subjects. Also, most of the theoretical literature concerning the possible etiological role of the family in the development of schizophrenia has dealt with adolescent and adult cases of schizophrenia. Those studies which have investigated the familial environment of autistics and childhood schizophrenics will be listed in the review of studies as "disqualified" from analysis in this paper.

Chapter II describes the major theoretical and methodological inadequacies which characterize these family interaction studies. Where possible, information concerning the percentage of studies "guilty" of displaying a certain inadequacy will be calculated and stated. For example, it was found that 55 percent of these studies established absolutely no control groups for study.

The generalizations offered in Chapter II concerning the inadequacies of these studies will be specifically supported, by example, in Chapter III by a concise summary and critique of each
of the 106 purported family interaction studies published from 1934 through 1963. This lengthy review is intended to support in detail the generalizations and conclusions offered in Chapter II. A review of the 32 studies published from 1964 through 1969 revealed that these studies manifested, with only a slight decrease, the same inadequacies as the 106 studies published from 1934 through 1963. Therefore, these latter studies are not individually summarized and critiqued -- to do so would increase the length of this paper to unmanageable proportions. Do note, however, that the generalizations offered in Chapter II are based on the analysis of all 138 articles.

Before presenting the generalizations derived from the review of these studies, this writer shall, in Chapter I, concisely review and critique the major "medical model" approaches to the study of the etiology of schizophrenia. Major studies illustrative of each approach shall be discussed. Such a review is intended to accomplish the following objectives:

(1) To demonstrate that the methodological inadequacies and inconclusiveness of the findings of the medical-model studies leave the question of the etiology of schizophrenia very much unanswered. Therefore, the sociological approach still has the potential to discover the primary etiological factor or factors. Family interaction studies, then, are important and necessary etiological efforts. It is important that such efforts be based on sound theoretical reasoning and methodological design.
(2) To demonstrate that many of the findings of medical-model approaches actually seem to support sociological as well as medical-model hypotheses concerning the etiology of schizophrenia. And, several of the medical-model studies actually produce findings which point clearly to a sociological rather than a medical-model explanation of the incidence of schizophrenia. Such findings make the necessity for well designed family interaction studies clearly evident.

(3) To demonstrate that many of the methodological weaknesses which characterize the medical-model studies are also characteristic of many sociologically designed studies. In short, the study of the etiology of schizophrenia presents certain conditions which are problematic for all theoretical and methodological approaches to the problem. For example, Jackson (1960) points out that the diagnosis of schizophrenia is an unreliable diagnostic label in that the factors which determine whether or not an individual will be labeled as such vary across psychiatrists, psychiatric institutions, geographic locations, etc. Now, such a problem confronts all approaches to the study of the etiology of schizophrenia which use formally diagnosed and psychiatrically labeled schizophrenic subjects.

The functions of this paper are, in the final analysis, four-fold. First, of course, this paper documents a thesis concerning the
theoretical and methodological adequacy of family interaction studies concerning the etiology of schizophrenia. Secondly, this paper presents a general evaluation of the available empirical evidence concerning the etiology of schizophrenia. The findings of several different approaches to this problem are discussed. Thirdly, this paper serves as a bibliographic guide for the 138 purported family interaction studies which were published between 1934 and 1969. And, finally, this paper provides a specific summary and critique of each of the 106 purported family interaction studies which were published between 1934 and 1963.

To summarize, this writer analyzed 138 purported family interaction studies concerning the etiology of schizophrenia which were published between 1934 and 1969. Each study was scrutinized as to its theoretical and methodological adequacy. It was discovered that the great majority of these studies suffer from serious inadequacies. Generalizations concerning the type and degree of these inadequacies are presented in Chapter II and Chapter III. Chapter IV provides a concise summary and critique of the 106 purported family interaction studies published between 1934 and 1963. This effort is designed to illustrate and document, by example, the generalizations offered in Chapter II and Chapter III. Chapter V provides a summary statement and suggestions for future research using the sociological approach. Chapter I presents a general review and critique of the "medical model" approaches to the etiology of schizophrenia. The major findings of these approaches are discussed. This chapter is primarily designed to illustrate that the question of the etiology of schizophrenia is
still unanswered. Therefore, family interaction approaches to the problem are valuable and necessary research efforts. However, the inadequacies manifested by family interaction studies have prevented the family interaction approach from reaching its true potential -- that is, carefully documenting the validity or invalidity of family interaction hypotheses concerning the incidence of schizophrenia. This is a disappointing state of affairs.
CHAPTER I
"MEDICAL MODEL" APPROACHES TO THE
ETIOLOGY OF SCHIZOPHRENIA

The Genetic Approach

The genetic approach to the etiology of schizophrenia has been, until the past two decades, the most widely used of the medical model approaches to this problem. This approach is based on the theory that a single gene or group of genes leads to a specific error in metabolism or some other bodily function which causes the manifestation of the behavioral syndrome which is specifically labeled schizophrenic (Rosenthal, 1971).

These research efforts have primarily been studies of morbidity rates (for schizophrenia) for parents, children, and siblings (including fraternal and identical twins) of schizophrenics. Kallmann (1938) conducted the first of the major or "classical" consanguinity studies. He investigated the mental health of the blood relatives of all schizophrenics admitted to a Berlin mental institution between 1893 and 1902. He studied these relatives (numbering over 1,000) until 1929. Kallmann reported that although the "risk" or probability of incidence of schizophrenia was 0.85 percent in the general population, the risk for individuals with one schizophrenic parent was 16.4 percent and was 68.1 for individuals with both parents schizophrenic. Kallmann also discovered that the
siblings of schizophrenic patients had the following risks for schizophrenia:

1. if the sibling was an identical twin: 85.8 percent;
2. if the sibling was a fraternal twin: 14.7 percent;
3. if the sibling was a "full" sibling: 14.3 percent;
4. if the sibling was a "half" sibling: 7.0 percent.

In short, Kallmann found that the probability of incidence of schizophrenia was greater for relatives genetically closer to a schizophrenic patient than for the more genetically removed relatives. Many similar studies have been conducted which support, generally to a somewhat lesser degree, the findings of Kallman.  

It is important to note here, however, that almost all of these researchers, including Kallmann, conclude that the "diathesis-stress" (Rosenthal, 1971) or genetic predisposition theory is a more accurate description of the etiological significance of genetics than is the "pure" genetic approach. That is to say, most genetic researchers conclude that a certain genetic transmission may act as a necessary, but not sufficient condition for the incidence of schizophrenia. The idea that the simple transmission of a gene or cluster of genes will automatically lead to the progressive and unhindered development of schizophrenia is rejected. Such a conclusion is based on the simple recognition that man is a social as well as biological being (as nicely articulated by Lidz, Fleck, and Cornelison, 1

1 See Book (1953, 1960), Fremming (1951), Kallmann (1946, 1950, 1953), Landis and Page (1938:81-85), Malzberg (1940), Prout and White (1956), Shields and Slater (1961), and Sjogren (1957).
1965) and that the manifestation and remission of schizophrenic symptoms depends on certain social contingencies (such as environmental stress placed upon individuals, coping mechanisms with which the individual has been socialized, cultural pressures upon the individual to take on the "sick role", etc.). In short, most geneticists readily recognize that the genetic inheritance of man is refracted through man's sociological situation -- his social environment, his socialization experiences, and his cultural orientations.

For example, Coleman (1964) says:

Neither Kallmann nor most other contemporary investigators now view schizophrenia as involving a simple recessive mode of inheritance. Rather, they conclude that it must be transmitted by genetic factors in the form of "predisposition" -- for example, that there may be some basic "error" in bodily metabolism which predisposes the individual to a schizophrenic reaction when placed under stress. In a favorable life situation with minimal stress, there is no reason to believe that a schizophrenic reaction will ever appear. (p. 286)

Kallmann, himself, has said:

In evaluating the effect of genetic factors in psychopathological variations, it would be generally helpful to bear in mind that from a genetic standpoint, unusual behavior of any kind is viewed as an extremely complex and continuous chain of events in the individual's adaptive history and not as some inevitable manifestation of an inborn error of metabolism. (Kallmann, 1958, quoted in Coleman, 1964:286)

David Rosenthal, the past Chief of the Laboratory of Psychology of the National Institute of Mental Health, and psychologist Robert K. White have been reviewing genetic studies for years. Both Rosenthal (1971) and White (1956) conclude that, at best, the genetic evidence may support the theory that genetic transmission is a necessary, but not sufficient, cause of schizophrenia. If this is
an accurate conclusion, then other factors must be present to bring about the manifestation of schizophrenic behavior. It is likely, theorize many of these researchers, that these factors may be found in man's immediate and/or past experiences in his social environment. Based on the conclusions of Rosenthal, White, and most other genetic researchers, it is evident that the genetic approach to schizophrenia has failed to completely and conclusively determine the etiology of schizophrenia.

This etiological inconclusiveness of genetic studies has been made even more evident by the release of the findings of some recently completed genetic research efforts. For example, Kringlen (1966) studied 500 pairs of twins in a very intensive and methodologically sophisticated study. He found concordance rates for schizophrenia among the twins to be much lower than the rates reported in earlier twin studies. For example, Kringlen found that monozygotic twins evidenced a 24 percent concordance rate for schizophrenia. Compare this to Kallmann's (1938) finding of 85.8 percent concordance rate for monozygotic twins. What is significant here is that Kringlen's study was methodologically strong (e.g., intensive efforts were made to accurately determine the zygosity of the twins and very carefully designed sampling procedures were followed) while Kallmann's was comparatively weak. Therefore, Kallmann's high concordance rates, as well as the high rates reported by other early genetic studies, may have been, at least partially, a product of poor methodological design.
The Center for Studies of Schizophrenia (a branch of the U.S. National Institute of Mental Health, 1971) reports that five studies (including Kringlen's) have been published between 1960 and 1971 concerning concordance rates for twins. These studies, said to be methodologically stronger than earlier genetic studies, reported findings strikingly different than those obtained by earlier twin studies. The Center reports that:

Two famous twin studies published prior to 1960 cited concordance rates (i.e., how frequently both members of a twin pair were diagnosed schizophrenic) of 76 and 86 percent, respectively, in identical twins and of 12 and 17 percent in fraternal twins. The five major studies undertaken since 1960, however, found concordance rates varying from 6 to 43 percent in monozygotic twins and from 5 to 12 percent in dizygotic twins. (p. 11)

Genetic research findings may also be considered inconclusive or, at best, very tenuous, in that several methodological weaknesses characterize these studies. For example, numerous\(^2\) social scientists have pointed out that those labeled as "schizophrenic" may actually manifest very heterogeneous types of behavior. This situation is due, according to these critics, to the fact that the criteria used to define behavior as "schizophrenic" are too diffuse and non-specific. Simply, several different kinds of behavior may be judged as "schizophrenic." And, the use of these diagnostic criteria may vary across psychiatrists, mental hospitals, geographic regions, and temporal psychiatric trends. For example, a "progressive" East Coast

psychiatrist might use diagnostic criteria differently than a traditional "Freudian" psychiatrist from the Mid-West. Therefore, even though both psychiatrists might label individuals as "schizophrenic," they may differentially use criteria to do so.

The unreliability of the term "schizophrenia" is also evident, according to the above cited researchers, in that certain "social contingencies" (Scheff, 1966) such as a patient's sex, age, race, socioeconomic level, and religious and ethnic background have been found to influence the probability that one will be formally diagnosed as "schizophrenic." Therefore, factors other than the stated psychiatric criteria may influence the diagnostic decisions. In this case, those labeled "schizophrenic" may differ considerably from those who display similar behavior, but have not been formally labeled "schizophrenic." It is important to note here that this is a problem which faces all researchers who study, in one way or another, "schizophrenics." Indeed this problem confronts the family-interaction researcher.

Another weakness of the genetic approach has been the failure of these researchers to attempt to classify their index subjects as "process" or "reactive" schizophrenics. "Process" schizophrenia refers to the long-term and gradual manifestation of the schizophrenic syndrome by an individual whereas "reactive" schizophrenia refers to the sudden or short-term manifestation of this behavior -- usually in late adolescence or early adulthood. Herron (1962) and other researchers (see Chapter II for a detailed discussion of this problem) have produced considerable evidence that this diagnostic distinction
is important in that these two types of patient populations differ significantly concerning life-history variables, physiological measures, sociological factors, and psychological dimensions. Especially in regards to the possible physiological differences in these patient populations, it is problematic that genetic researchers have usually failed to consider this diagnostic dichotomy in their research design -- especially in the data analysis procedures. Note here that all the other research approaches to the etiology of schizophrenia have also failed to properly consider this diagnostic dichotomy.

Several other weaknesses characterize the genetic approach. Jackson is one of the major critics of genetic studies. Several of Jackson's arguments (1960) are discussed below.

Jackson claims that many genetic researchers have not been objective in their analyses or rigorous in their application of methodological standards. This situation has been due to the fact that there has traditionally existed in the United States and Europe a culturally conditioned bias which has favored genetic explanations of "deviant" behavior. Because of this bias, argues Jackson, few people have been critical or skeptical of the methodology and "findings" of geneticists. Therefore, genetic researchers have become somewhat lax methodologically. Little methodological rigor has been demanded of them.

According to Jackson, this loss of researcher objectivity has been clearly evident when researchers have investigated the mental health of a relative of a schizophrenic. Because of his desire
to find concordance for schizophrenia between the relative and the schizophrenic, the researcher may tend to "oversearch" for negative personality traits characteristic of the relative. Or, if such traits are discovered, the genetic researcher may completely ignore the existence of obvious social environmental conditions of a pathological or stress-producing nature. Jackson reports, based on his analyses of scores of genetic studies, that this problem has characterized many of these studies. Jackson argues that somehow these relatives must be "blindly" diagnosed by unknowing experts (p. 44).

Jackson also questions the genetic explanation of schizophrenia by pointing out that no phenotypical defect has been found to be associated with schizophrenia. This is contrary to other psychiatric disorders with a well-recognized hereditary basis which reveal evidence of accompanying phenotypical defects. Jackson also points out that "...there has been established no relation between hereditary taint, type of schizophrenia, age at onset, and outcome" (p. 9). This, too, is contrary to the patterns associated with other genetically based disorders.

A related weakness of the genetic theory, according to Jackson, is its incompleteness of explanation. For example, the mode of genetic transmission has not been clearly determined (Alanen, 1958:51, and Rosenthal, 1971:58, both concur). Mode of transmission, of course, is a central part of the articulation of any genetic theory. The failure to solve this problem has greatly frustrated many geneticists. What is especially frustrating is that the geneticists seem to be
getting contradictory findings as they conduct their studies. For example, both Kallmann (1946), Slater (1953) and "many others" (according to Alanen, 1958:42) have discovered that the morbidity risk of the same-sexed dizygotic co-twins for schizophrenia is approximately twice as high as that of the opposite-sexed twins. These findings are contrary to the findings of other studies (see Alanen, 1958:42) and to the long-accepted hypothesis of geneticists that schizophrenia is not associated with sex-determined genetic factors.

Jackson also attacks the genetic theory by discrediting the popular belief of many scientists and laymen that there have been "many" documented cases of identical twins being raised in separate environments who subsequently manifest the schizophrenic syndrome. Jackson says:

...let it be said here regarding twins who are alleged to have been reared apart and who both develop schizophrenia, that an exhaustive search of American and European literature of the past forty years has uncovered only two such cases. (p. 40)

Jackson points out that even these two cases could have been due to chance. The National Institute of Mental Health (1971) has conducted a similar review of the literature and has reached the same conclusion.

The "twin studies," which have been an integral part of the research programs of geneticists, also are critiqued concerning several points by Jackson. He first explains that since identical twins share the same maternal circulation, environmental factors such as poor maternal nutrition could lead to some kind of constitutional
predisposition for schizophrenia. This hypothesis, of course, is in contrast to a simple genetic explanation of why identical twins may both manifest schizophrenic behavior. Jackson simply argues that the genetic approach cannot rule out environmental hypotheses designed to explain the incidence of schizophrenia. Price (1948) and Neel and Schull (1954) have voiced similar warnings.

Jackson also argues that the sampling of twins for study has been based on a selective factor -- i.e., hospitalization of at least one of the twins. Jackson wonders about the mental health of a schizophrenic twin and his sibling who are not hospitalized. Perhaps the concordance rates are not as high.

One final criticism of twin studies was offered by Jackson. Most pre-Kringlen (1966) studies of twins did not make adequate efforts to accurately determine the zygosity of the twins. Therefore, it is possible that the number of "identical" twins reported to be concordant concerning schizophrenia may be exaggerated. Gregory (1960) has voiced a similar critique.

Jackson concludes his general critique of the genetic studies with two major points. First, it is clear from Jackson's analysis of genetic studies that the demographic and sociological characteristics (e.g., age, sex, ethnic and religious background, race, occupation, socioeconomic status, level of educational achievement and presence of both parents in the home) of these index subjects were not controlled in the study design nor were they described and accounted for in the data analysis and interpretation. This is a weakness of these studies because without accounting for these various non-genetic
factors, it is not possible to be sure that genetic differences are the key etiological factors associated with the incidence of schizophrenia. Non-genetic factors have indeed been shown to be associated with the incidence of schizophrenia. For example, Pollock, Malzberg and Fuller (1940) reported that 38 percent of their sample of 175 schizophrenic patients came from broken homes. This is a considerably higher rate than the twelve percent which was reported for the general population. Lidz and Lidz (1949) conducted a similar study and found that 40 percent of 50 schizophrenic patients came from broken homes. At that time, the U.S. average for broken homes was 13.5 percent. Similar findings were reported by Barry (1939, 1949).

Another example of a non-genetic factor which has been found to be associated with the incidence of schizophrenia is an index family's immigration status. As Jackson points out, if a group of immigrants is included in a genetic sample, it may make the rate of schizophrenia higher in that group because there is evidence (e.g., Cade, 1956) that immigrants are found to be schizophrenic almost twice as often as those in the general population. The genetic researcher may simply attribute high rates of schizophrenia to genetic transmission when, in actuality, it is possible that the social situation faced by immigrants (e.g., immigrants may be "marginal men" in society) may be etiologically associated with the incidence of this disorder.

Other demographic and sociological variables such as socioeconomic status, level of educational achievement (e.g., see Hollingshead and Redlich, 1958, and Srole et al., 1962) and place of residence
(e.g., see Dunham, 1965, and Paris, 1939) have been shown to be related in a significant way to the incidence of schizophrenia. Such findings make clear the need to either control these possibly influential variables in the selection of samples and control groups or to at least consider the presence of these variables in the data analysis and interpretation. Jackson reports that genetic studies have not considered these demographic and sociological factors. This is a major weakness of genetic studies to date.

Perhaps Jackson's strongest argument concerning the shortcomings of the genetic approach is his observation that data obtained by these studies may actually be used to support non-genetic theories concerning the etiology of schizophrenia. Simply, the geneticists have not been able to rule out "rival hypotheses" or rival interpretations of the findings obtained.

An example of this weakness, according to Jackson, are the findings of the "twin" studies. These studies have found high morbidity rates (relative to the rates evident in the general population) for schizophrenia among identical and fraternal twins. Geneticists argue that this is evidence for a genetic transmission of schizophrenia or, at least, a predisposition for schizophrenia. However, Jackson points out that numerous family interaction studies have confirmed the hypothesis that mothers seem to display abnormal interpersonal relationships with twins. In this situation, the twins may be forced into a close, but mutually hostile and dependent situation. Here their identities become intertwined. What is experienced may be termed ego fusion (in that the "other" is part of
the "self" -- from the perspective of one of the twins) and ego fission (in that the "self" is felt to be part of the "other"). Such a situation, according to family interaction researchers, leads to serious identity problems for the twins which may lead to an eventual manifestation of the schizophrenic syndrome by both twins. Jackson sums up this point as follows:

If the psychodynamic thesis is correct, if ego fusion in a particular family environment can be expected to lead to joint madness, then a plausible hypothesis -- contrary to the genetic hypothesis -- would be that, according to the degree of likeness in siblings, we will find an increased concordance for schizophrenia, without concern for genetic similarity. (1960:67)

This psychodynamic hypothesis is supported by the fact that fraternal twins (who don't differ from ordinary siblings other than the fact that they are born at the same time) have a greater concordance for schizophrenia than do ordinary siblings in all published studies. What is surprising here is that many geneticists compare the concordance rate for fraternal and ordinary siblings and conclude that the differences found in the rates support the genetic theory. Such a conclusion does not seem logical. In actuality, argues Jackson, such differences support interpersonal (or "family dynamic") theories.

Jackson concludes (as does Coleman, 1964) that genetic data (results of twin studies as well as simple consanguity studies of relatives of schizophrenics) have not, in general, eliminated the more interpersonal or sociological etiological theories. Even the basic consanguity studies simply show that schizophrenia may be handed down from one generation to the next. The geneticists assume that the mode of transmission is genetic. However, perhaps the mode of
transmission is social instead. It is just as likely, perhaps, that schizophrenic symptoms may be taught to a child through the socialization process. Or, abnormal family interaction patterns might simply upset an offspring to the point that he manifests schizophrenic symptoms. These are possibilities which the geneticists should not rule out. Therefore, even their own findings do not clearly support the genetic theory concerning the etiology of schizophrenia.

The Biochemical Approach

The biochemical hypothesis concerning the etiology of schizophrenia "...has been largely based on the belief that a qualitatively or quantitatively abnormal substance may be causally related to schizophrenia occurrence" (Wyatt, Termini, and Davis, 1971:44). For example, efforts have been made to find enzymatic differences in the brain and blood of schizophrenics as compared to "normals" (Abood, 1960).

These biochemical research efforts have been generally divided into testing two major hypotheses. The first of these approaches attempts to determine the chemical effects of the faulty metabolism of certain substances. This approach is based on an acceptance of the genetic hypothesis which posits that a specific metabolic error is transmitted genetically (Kety, 1960). The second hypothesis which is tested posits that biochemical changes result due to various "stresses" which confront the individual.

In general, it can be said that biochemical studies have, to date, not been able to determine any such biochemical etiology of
schizophrenia. Wyatt, Termini, and Davis (1971), for example, conducted an extensive and up-to-date review of the literature over the past ten years and concluded that: "To date, no biochemical abnormalities have been consistently and exclusively associated with schizophrenia..." (p. 44).

Kety (1969) also carefully reviewed the literature concerning biochemical research efforts and concluded that "...in spite of the large number of abnormal chemical findings which have been reported on schizophrenia, few have been independently confirmed and on none is there general agreement with regard to its significance" (p. 221).

Not only are the biochemical findings inconclusive, but they are also characterized by some major methodological weaknesses which cast doubts on the findings which have been obtained.

Kety (1969) points out that those diagnosed as schizophrenic may be a very heterogeneous group due to the varying and non-standardized criteria often used to determine the presence of the schizophrenic syndrome. And, social contingencies (e.g., differential tolerance limits of the community) may influence the decision to place one under formal psychiatric care where he may be diagnosed as a schizophrenic. These are the same problems which were discussed in relation to the genetic research approach. Simply put, the detection of specific biochemical abnormalities in heterogeneous samples

or samples which have been selectively constructed according to social criteria are indeed difficult to interpret.

Kety (1969) and Book (1960) point out that any chemical differences found among schizophrenic patients may actually be a result of the patients' hospitalization. For example, while hospitalized, the patient may be exposed to poor hygienic standards on the ward, may experience stress due to overcrowding and lack of privacy, may lack proper nutritional care, and fail to get proper exercise. Note that almost all of the biochemical studies have used hospitalized subjects. The basic problem here is that one cannot be sure if research results indicate the causes or consequences of a subject's mental disorder and subsequent hospitalization (National Institute of Mental Health, 1971:19).

Like the genetic approach, the biochemical approach has failed to eliminate at least one major rival hypothesis concerning the biochemical findings. That is, the interpersonal or sociological hypothesis may actually be relevant to understanding those biochemical abnormalities which are discovered among schizophrenics. As Coleman (1961:286) points out, there is increasing evidence that early environmental influences of a social nature (especially within the family) can lead to metabolic errors which result in certain chemical imbalances. Therefore, it may be possible that a socially "pathological" or "stressful" environment can lead to the development of chemical imbalances in an individual.

A final problem of these studies concerns the failure of the biochemical researchers to control for, or at least take account of,
the demographic, sociological, and psychological (process vs. reactive schizophrenia?) characteristics of the study population. As explained above in regards to the genetic approach, these factors may be differentially associated with the incidence of schizophrenia. Therefore, it is important that these variables be accounted for in either the study design or data analysis.

In summary, the inconclusiveness and inconsistency of the findings as well as the above mentioned methodological weaknesses and the failure of biochemists to consider a sociological interpretation of their findings leads to the conclusion that the biochemical studies have not succeeded in isolating any major etiological factor or factors associated with the incidence of schizophrenia.

**The Physiological Approach**

Physiology refers to a branch of biology which deals with the processes, activities, and characteristics of living matter. This is the broadest approach to the etiology of schizophrenia and the genetic and biochemical theories may be subsumed under it.

One major aspect of physiological studies is an analysis of the general constitution of an individual. As Coleman (1964), the National Institute of Mental Health (1971:9-11), and Sontag (1960) point out, there is considerable evidence which supports the hypothesis that schizophrenics are constitutionally weaker than normals. However, the etiological significance of this finding is uncertain in that this general bodily weakness may be a consequence of poor prenatal or infant care or may simply be a by-product of the schizophrenic
disorder itself. Again, one is not sure if this finding represents a cause or consequence of schizophrenia.

Herron (1962), for example, has reported some general physiological differences between "process" and "reactive" schizophrenics. But, the etiological significance of such findings are unclear, and physiological researchers have often failed to take account of this diagnostic dichotomy in the study design or data analysis.

Coleman (1961) has reviewed much of the literature concerning studies made of the general physique or body type of schizophrenics as compared to normals. Coleman concluded that these studies have not documented any real differences between these two populations. Alanen (1958a) and Jackson (1960) have reached the same conclusion.

Coleman (1961) also reviewed the evidence concerning the hypothesis that schizophrenics develop in an atypical physiological manner (e.g., characterized by retardation of respiratory, nervous, and other systems). Again, Coleman found no conclusive evidence to support such a hypothesis.

The hypothesis that schizophrenics have a deficiency of "adaptive energy" has also been rejected by physiological researchers (according to Coleman's review of this literature conducted in 1961).

And finally, Coleman (1961) reviewed the evidence concerning the hypothesis that certain people suffer from disturbances in basic neurophysiological processes (which lead to abnormal brain functioning) when they are put under stress. Coleman reviewed the major studies concerning the affect of stress upon: (1) excitatory and inhibitory processes; (2) the production of endogenous hallucinogens; and
(3) one's ability to sleep. In general, Coleman's review revealed that more information is needed in all these areas and that most of the data available are inconclusive. Coleman does point out that stress does seem to be somewhat associated with sleep loss and that the metabolic effects of sleep loss are significant. But, whether or not this situation is of primary etiological significance has not yet been determined (Jackson, 1960; and Wyatt, Termini, and Davis, 1971, all concur).

It is extremely important to note here that many of these physiological researchers hypothesize that stress may be the primary factor leading to the manifestation of disturbances in neurophysiological processes. Therefore, if this hypothesis is correct, physiological problems would be a secondary etiological factor while "stress" would be the initial or primary etiological factor. It is very possible, of course, that this "stress" could be social in nature. Therefore, even if physiological factors are isolated by these researchers, the possibility exists that they are a consequence of social stresses. By no means, then, does the physiological theory negate a more sociological theory.

Note that the physiological studies suffer from many of the same methodological and theoretical weaknesses as do other approaches. For example, it is not clear if the findings obtained are a cause or consequence of schizophrenia. Samples used in physiological studies are usually not analyzed concerning demographic, sociological, or psychological variables (i.e., "reactive" vs. "process" diagnostic type). And, the subjects are "schizophrenics" -- again the reliability
of diagnostic criteria is a problem.

In summary, the physiological theory concerning the etiology of schizophrenia has not been successful in isolating key etiological variables of a specifically physiological nature.

**The Psychological Approach**

The psychological approach to the etiology of schizophrenia has generally consisted of two types of theoretical and methodological designs. The one approach is quite sociological in nature. That is, interpersonal theories, socialization processes, theories of personality development, and other social experiences are hypothesized to be etiologically associated with the incidence of schizophrenia. Many of the "family interaction" studies with which the rest of this paper deals are representative of this type of psychological research effort. The second approach characteristic of many psychologists can be readily characterized as exemplary of the medical model perspective. It is this medical model type of psychological approach which shall be discussed here.

Winder (1960) has written extensively concerning these research efforts. His analysis is based on a careful review of the literature and upon his own similar research experiences. Winder reports that most psychologists who use the medical model perspective examine behavior under controlled situations. These investigations are usually concerned with one of the following: intellectual functioning, psychomotor functioning, perception, thinking ability, and learning ability.
According to Winder, those studies which have dealt with intellectual functioning have found significant differences among various sub-types of schizophrenics (e.g., paranoid vs. hebephrenic). However, in comparison to "normals", it appears that only a minority of schizophrenics show intellectual deficit. There are, however, several problems with these studies of intellectual deficit. First, many demographic and sociological variables have not been controlled or accounted for in the study design and/or data analysis. Secondly, the tests of intellectual ability are too short, inadequately standardized, and lack scale homogeneity. Thirdly, often the populations chosen for study do not represent the typical mental patient. For example, some studies have reportedly tested predominately illiterate samples of chronic elderly patients concerning their intellectual abilities. And, finally, tests of intellectual deficit do not usually tell the researcher if the deficit found is due to organic or environmental problems.

Psychological studies designed to investigate the psychomotor functioning of schizophrenics have analyzed such things as the speed of tapping, manual dexterity and precision, steadiness of bodily movements, and individual reaction time. Winder reports that results of tests concerning these items indicate that schizophrenics show lesser abilities than "normals." For example, findings indicate that schizophrenics' reaction times are slower and more variable than the times recorded for "normals". However, the etiological significance, if any, of these findings are very unclear. Actually, says Winder, these studies provide basically clinical
descriptions of schizophrenic patients in the hope of finding problematic patterns which may be further researched for etiological significance. In their own right, such studies are not primarily etiological -- but descriptive of the psychomotor functioning of schizophrenic patients.

Winder also reviewed the findings of studies of perception. Generally these studies revealed that schizophrenics have trouble perceiving and subsequently adopting social norms. Studies using the autokinetic phenomenon with schizophrenics are illustrative of the kinds of studies conducted concerning perception. Winder also reported that other perception studies found that schizophrenics have difficulty with accurately perceiving their own adequacy and resource potentials as well as those of others.

In short, many of the perception studies characterize the schizophrenic as one who has not learned interpersonal and role skills adequately. Such findings, of course, seem to support a more sociological theory concerning the etiology of schizophrenia.

Other studies, reported Winder, found that schizophrenics are slower than "normals" in concept formation, problem solving, and learning processes. But again, it must be stressed that the etiological significance of such findings are very unclear. It may be that these findings simply reflect the consequences of someone being schizophrenic. These findings may be completely unrelated to any initial etiological factor or factors associated with the incidence of schizophrenia.
These medical model psychological studies, it must be pointed out, suffer from the same methodological weaknesses as the studies of other research approaches which have been discussed above. Demographic, sociological, and psychological characteristics of the study groups have not usually been considered. Secondly, the diffuseness of the term "schizophrenia" and the unreliability of the criteria used to diagnose someone as "schizophrenic" may make for a very heterogeneous or non-representative sample of schizophrenics.

A Summary Statement

This chapter has described the etiological inconclusiveness of the "medical model" approaches to determining the etiology of schizophrenia. It has also been shown that many of these studies have produced findings which may actually be supportive of a sociological or interpersonal etiological theory. Therefore, this latter approach is potentially a very productive etiological investigation. It is important that the studies characteristic of such an approach are theoretically and methodologically sound. The next two chapters will document the thesis that the primary research approaches (i.e., "family interaction studies") used by sociologically oriented researchers have not, for the most part, been theoretically or methodologically sound.
CHAPTER II
A CRITIQUE OF THE THEORETICAL ASSUMPTIONS
OF FAMILY INTERACTION STUDIES

The previous chapter has documented the general inconclusiveness of the medical model approaches to the question of the etiology of schizophrenia. It was also pointed out that many of the findings obtained by the medical model approaches actually may be used to support etiological theories of a more sociological nature. These conditions may lead one to the conclusion that family interaction studies have great potential for obtaining new and significant etiological data. Unfortunately, this potential may not be realized due to the tenuous theoretical assumptions underlying most family interaction studies. These assumptions are discussed below.

Family interaction studies, with few exceptions, assume that the mental well-being of an individual is largely dependent upon the individual's interpersonal relationships and socialization experiences with his family during his childhood. Such an assumption is questionable for three basic reasons.

1See Appendix A for a complete listing of the "purported" family interaction studies which have been reviewed by this writer. The evaluations offered in this paper concerning the theoretical and methodological adequacy of family interaction studies are based upon this review.
First, this assumption fails to consider other non-familial social groups and socialization agencies within the society which may influence and shape the personality and mental health of a developing child. For example, schools, churches, clubs, gangs, athletic groups, and the mass media may all provide non-familial interactional and socialization experiences for the child. As Gordon (1972:5) points out, family members in contemporary society are less dependent upon each other as they carry out their various life activities. Other groups and institutions have more influence than ever before on the mental health and socialization of the individual. Henry and Warson (1951) seem accurate when they say "...it is not possible to understand the vicissitudes of child development in terms of simple parent-child or sibling relationships; we must attempt to understand child development in terms of ... broader configurations" (p. 72).

Alanen (1968) makes a similar point in his study when he critiques psychoanalytical theory. He argues that psychoanalysts place too much emphasis on the libido and early ego differentiation in parent-child relationships while ignoring the child's individual attempts for individuation of the self outside of the family.

A study by Demerath (1943) demonstrates the importance of socialization agencies other than the immediate family. Demerath analyzed the psychiatric case histories of 20 hospitalized adult schizophrenics and found that these individuals were rejected by their peers in school because they were too eager to conform to adult expectations concerning scholarly excellence, moral perfection, and submissiveness. Demerath concludes that a child and
adolescent must participate in the informal group life of his peers if he is to be socialized with the proper social skills necessary for adult living. Here the emphasis is on peer groups as primary socialization agencies.

The second reason that the underlying assumption of family interaction studies seems tenuous is that it fails to explain why it takes so long for the "pathological" childhood socialization and interactional experiences to bring about the manifestation of the "psychotic break" which leads to hospitalization and diagnosis as schizophrenic. Arieti (1955), Deutsch and Fishman (1963:Volume V: 1789), Freedman and Kaplan (1967:600), Jaco (1960) and Rosenthal (1971) all concur that the median age for first admissions to a mental hospital is between twenty-five and thirty-four years of age. Such a figure casts doubt upon the childhood interpersonal and socialization theories in that one wonders why these childhood influences took so long to manifest themselves as a disorder in the mental health of the individual. The question is raised: "How can childhood experiences have such a strong impact on the individual 15 to 25 years later?" Unfortunately, most family interaction researchers have not attempted to explain this time lag.

A third problem with the assumption that the mental well-being of an individual is largely dependent upon the individual's interpersonal relationships and socialization experiences with his family during his childhood is that it ignores the possibility that non-childhood and non-familial life events and situations could be etiologically associated with the incidence of schizophrenia. Simply,
it seems reasonable to hypothesize that life events close in time to the "psychotic break" may be somehow etiologically associated with that break. There is some evidence to support such a general hypothesis. For example, Adamson and Schmale (1965) examined social histories of hospitalized psychiatric patients (no breakdown according to diagnosis was provided) and found considerable evidence, in the majority of cases, of incidents which seemed to induce the psychotic break during adulthood. Financial disasters, death or separation from loved ones, and employment problems were just some of the events found to be often associated with the manifestation of schizophrenic symptoms.

George Brown and J. L. T. Birley (1968) conducted a well designed study intended to examine the life events of schizophrenics during the twelve weeks prior to the onset of the disorder. Comparing the schizophrenic social histories with those of generally well matched "normal" controls, Brown and Birley concluded that: "The patient group had nearly double the number of events (i.e., 'life crises and life changes') per person compared with the general population sample" (p. 212). Brown and Birley were careful to demonstrate that these events were acts of fate ... not consequences of already disordered behavior on the part of the individual. The stresses placed upon many of these individuals were quite astonishing in severity. In these situations, a schizophrenic reaction may seem understandable.

Langner and Michael (1963), using data obtained in the Midtown Manhattan Study (Srole, et al., 1962), found that those suffering from
mental illness had been exposed to more general stresses all through­
out their life than had "normals". Here, again, these stresses
included physical illness, financial problems, and loss of loved
ones. Other studies which obtained similar results include Birley
and Brown (1970), and Eitinger (1964). Also concerned with general
life stresses, Dohrenwend and Dohrenwend (1969) focused on the rela­
tionship between stress and social class. Using a community survey
in New York City, they compared lower class Puerto Ricans with mid­
dle class Puerto Ricans (here controlling for ethnicity). The same
comparisons were made for Negroes. The findings of the study sup­
ported the hypothesis that lower class individuals experience more
stressful situations and therefore develop differentially more men­
tal illness. Here again, the emphasis is on general life stresses --
not just interpersonal experiences during one's childhood and within
one's primary family.

Rogler and Hollingshead (1965) studied the interaction pat­
terns of 40 lower class families located in San Juan, Puerto Rico.
Twenty of the families had a non-hospitalized schizophrenic "spouse"
(i.e., husband or wife) while 20 families contained "well" indivi­
duals. These two groups of families were very well matched concerning
age of the parents, religion, socioeconomic status, and place of
residence.

These researchers directly observed these families inter­
acting in their homes for a period of four years. Detailed and
repeated interviews were also conducted with each family member.
These interviews focused on the past and present social and life
experiences of each parent. Special attention was given to the background of the schizophrenic spouse.

The data analyses revealed that "...experiences in childhood and adolescence of schizophrenic persons do not differ noticeably from those of persons who are not afflicted with this illness" (p. vii). However, it was discovered that during the twelve-month period leading up to the spouse's first psychotic break, this individual experienced serious social-environmental stresses which were not evident in the social histories of the "well" spouses. The schizophrenic group was found to have experienced more: (1) economic difficulties; (2) physical illness; (3) matrimonial conflicts; (4) conflicts between the nuclear and extended family; (5) conflicts with their neighbors; (6) loss of personal prestige; and (7) frustration of personal aspirations. These stresses, theorize Rogler and Hollingshead, present a...set of interwoven, mutually reinforcing problems...which produces an onrush of symptoms which overwhelm the victim and prevent him from fulfilling the obligations associated with his accustomed social roles" (p. vii).

As the victim continues to fail to fulfill his social obligations, he experiences more and more anxiety and personal stress -- finally culminating in the schizophrenic break.

These researchers present this summary statement:

The etiological processes culminating in the development of schizophrenia may be of relatively recent origin. Childhood and adolescent experiences provide meager clues for an understanding of the way the illness develops. In contrast, at a recent and discernible period in the life and prior to the eruption of overt symptomatology, a rash of insoluble, mutually reinforcing problems emerges to trap the person. We suggest that further research
focus on this critical period. To arrive at a more precise understanding of the experiences and events which transpire during this period, field studies must develop research techniques to identify and measure the complex interactional processes which bind the person into intolerable dilemmas. (p. 413)

Sampson, Messinger and Towne (1961) studied the life-experiences of 17 women who were hospitalized as schizophrenics. While most family interaction studies have been primarily concerned with a subject's childhood family relationships, this study focused upon the more recent family setting of the patients. These researchers report that the recent family setting is "...a strategic site for personality stabilization in adult life" (p. 6).

Sampson, Messinger, and Towne conducted repeated interviews with the patients and their spouses; case histories and other social records were examined; and observations were made of the interaction patterns manifested by the patient and the spouse. Analyzing the data from these sources, it was concluded that the "adaptive mechanisms" of the family had broken down for many of these women in the months immediately preceding the onset of the schizophrenic behavior. That is, the social stability and harmony of the family appeared to have deteriorated significantly.

Other studies focus on other sociological variables which may be of etiological significance in contrast to the study of solely childhood experiences. For example, Hollingshead, Ellis, and Kirby (1954) concluded from a study of schizophrenic and psychoneurotic patients that "...Vertical mobility has been shown to be a factor of significance in both schizophrenia and psychoneurosis, in the representative samples of two classes of the New Haven population" (p. 584).
These authors theorize that these findings indicate a possible relationship between status striving, anxiety, and mental health. For example, it may be theorized that if one has high occupational aspirations and then is demoted, his reaction may be some form of severe mental imbalance.

Dynes, et al. (1964), present three other "sociocultural" theories of the etiology of mental illness which may also be juxtaposed to the childhood socialization theories.

First, Dynes, et al., discuss the "Discontinuity Theory." Here the individual, it is theorized, develops mental disorder due to severe anxiety caused by the fact that one holds a marginal position in society. In this case, the individual's statuses and roles are not well defined. Dynes, et al. speculate that as society becomes more and more industrialized this situation will become more predominant.

Secondly, Dynes, et al., discuss the "Social Isolation Theory". Here the individual is said to develop psychoses because he lives (ecologically and socially) in an impersonal and anonymous area. He has few interpersonal relationships. He begins to lose his social skills and his seclusion becomes even more permanent eventually leading to a total withdrawal from reality. This theory was originally presented by Robert Faris in 1934 and given some empirical support by Faris and Dunham in 1939. In this latter study, those admitted to a mental hospital for the first time were found to come from mostly areas of the city characterized by low socioeconomic status and high residential mobility. And, a great many of these
individuals were ethnic group members living in non-ethnic areas or among the foreign born living in the slums.

Dynes, et al., also discuss the "Social Integration Theory" which is based on Durkheim's (1951) concept of "level of social integration." In this situation, an individual may be over-integrated into the group causing obsession and escape from reality or under-integrated into groups leading to seclusion and eventual withdrawal from reality. Leighton, et al., (1963) have conducted an empirical study which supports this theory.

Pollock, Malzberg, and Fuller (1939) studied sexual activity as an important factor which may affect one's immediate sense of social well-being. Studying the past and present social situations of schizophrenics and manic-depressives, these researchers discovered a very high incidence of sexual problems and abnormalities which were especially pronounced at the time of the onset of the psychotic symptoms. Such problems may, it was theorized, lead the individual to feelings of worthlessness and result in psychotic withdrawal.

It is also plausible that one's occupational status may affect one's mental well-being. Odegaard (1956) investigated this hypothesis in an epidemiological study in Norway between 1926 and 1950. He reported that the highest admission rates for psychoses were in occupations with low prestige and standards of training. However, he interpreted these findings to mean that people with unfavorable personal characteristics are selected out and gravitate to these jobs in contrast to the interpretation that these kinds of jobs are etiologically connected to the incidence of psychoses.
Jaco, however, pursued this hypothesis in his 1960 epidemiological study in Texas. He concluded:

When adjusted for age, sex, and subculture, incidence rates of all psychoses were highest for the unemployed. Rates were next highest for professionals and semi-professionals, followed by the rates for service, manual, clerical and sales, agricultural workers, those not in the labor force, and for the managerial, official, and proprietary occupations. (p. 143)

Kleiner and Parker (1963), Myers and Roberts (1959), and Parker and Kleiner (1966) investigated the hypothesis that a discrepancy between one's aspirations and one's achievements can lead to frustration eventually resulting in psychosis.

For example, Parker and Kleiner (1966) analyzed the life aspirations of psychotic Negroes as compared to the life aspirations of "normal" Negroes. These two groups were well matched concerning several demographic and sociological variables (sex, socioeconomic status, religion, age, marital status, and residence). The psychotic Negroes were found to have significantly higher life aspirations -- often indicative of extremely unrealistic attitudes. When these aspirations were not met, these individuals, it was theorized, experienced severe stress which led to the manifestation of psychotic symptoms.

A Summary and Concluding Statement

The assumptions which form the theoretical base of family interaction studies are these:

(1) Childhood socialization and interpersonal experiences within the immediate family are the major determinants of the individual's present and future mental health.
(2) These childhood experiences may not bring on a psychotic break until several years or decades later.

(3) Other life-experiences, closer in time to the onset of the disorder, are not primary causes of the psychotic break although they may be "precipitating" influences.

These assumptions, it has been argued, are quite tenuous. Alternative etiological theories and representative studies concerning these theories have been discussed.

At this point it should be pointed out that these alternative studies were often methodologically weak (especially in that control groups were either completely lacking or inadequate) and usually concluded that the factor they were investigating could at best be considered a necessary but not sufficient cause of schizophrenia. Other studies completely begged the etiological question and just designated these factors as "precipitating" events which could bring on the manifestation of some latent disorder.

In short, adequate studies of these alternative social-psychological theories are lacking. Much more research needs to be done in regards to focusing in on the immediate sociological predicament of the individual in contrast to intensive studies of his childhood experiences. The need for such studies is especially pressing in light of contemporary sociological opinions that with the breakdown of the "extended family," increasing physical and social mobility, and increasing "segmental participation" of the individual in society's secondary social organizations, the individual will experience various types of non-familial socialization processes.
CHAPTER III

MAJOR METHODOLOGICAL WEAKNESSES OF FAMILY INTERACTION STUDIES

Methodological inadequacies of family interaction studies may be divided into two types from the perspective of the sociologist. First, there are certain methodological weaknesses which are especially repugnant to the sociologist in that specific sociological facts and variables are ignored or their importance is minimized. And secondly, there are other methodological weaknesses of a more general nature. These weaknesses would most likely be repugnant to all social scientists -- regardless of the area of specialty. This chapter shall discuss these inadequacies in the order mentioned above.

Part 1: Methodological Weaknesses of an Especially Sociological Nature

The first major weakness of these studies, which is especially distressing to the sociologist, is the fact that 55 percent of the family interaction studies analyzed by this writer did not designate for study any "comparison" or control groups. Most studies investigated the personality characteristics, attitudes, and behavioral tendencies of the parents of schizophrenics or analyzed the general familial interaction patterns or role structures of a family with a schizophrenic member without conducting a similar investigation of
numerous families which had no schizophrenic member. Without studying such a control group, the specificity of the findings concerning the family with a schizophrenic member are unknown. That is to say, one cannot be confident that a certain factor is etiologically significant unless this factor can be shown to be present only in a family with a schizophrenic member while being absent in other comparable families which do not contain a schizophrenic.

Although it is distressing to the sociologist that most studies did not designate control groups for investigation, it is especially distressing to the sociologist that when control groups were designated, 80 percent of them were not demographically and socially comparable to the study group. This is sociologically problematic in that sociologists have found that various demographic and sociological factors (e.g., age, sex, socioeconomic status, occupation, religion, race, ethnic and cultural background, place of residence, and level of educational achievement) are differentially associated with certain clusters of beliefs, attitudes, behaviors, and general life circumstances and life chances. Because demographic and sociological factors are associated with these kinds of differences across groups, it is important that they be "held constant" when constructing study and control groups. Therefore, the study and control groups should be made as comparable as possible concerning these factors.

A second weakness of these studies, closely related to the first, is that among the 55 percent of the studies that did not designate control groups for study, 85 percent of these did not even provide
basic information concerning a majority of the major demographic and sociological characteristics of the study group itself.\(^1\) Therefore, it was impossible to determine how heterogeneous or homogeneous the study group was concerning these variables. The inability to make such a calculation makes it difficult to know how representative the study group was of "typical" families with a schizophrenic member. And, it also becomes difficult to determine what, if any, selective factors operated to influence the selection of families for study.

Examples of how such demographic and sociological factors are associated with differences across groups are numerous. For example, several studies have shown that different social classes are characterized by different child-rearing attitudes and practices. Maccoby and Gibbs (1953) conducted a study and concluded that "...we find that the upper-middle-class mothers are consistently more permissive, less punitive, and less demanding than the upper-lower-class mothers" (p. 395).

Myers and Roberts (1959) found that lower-class psychotics typically came from homes in which they were rejected, isolated, and often subjected to cruel treatment in contrast to middle-class psychotics who had a much better home atmosphere.

Bronfenbrenner (1958) studied child-rearing attitudes and practices for 25 years and consistently discovered that "middle-class"

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\(^1\) As mentioned earlier in this paper, the following demographic and sociological factors are considered by this writer to be of "major" concern: age, sex, socioeconomic status, occupation, religion, race, ethnic and cultural background, place of residence and level of educational achievement.
parents were more accepting and equalitarian than "working class" parents who were mostly concerned with maintaining order and obedience.

Kohn (1959) studied 200 "working-class" families and 200 "middle-class" families using an interview technique. He found that working-class parents valued obedience, neatness, and cleanliness more than middle-class parents. Middle-class parents were found to value more highly consideration for others, self-control, and curiosity.

Sanua (1961:248-249) reviewed four other studies with similar results while this author noted these studies which also found similar differences in child-rearing attitudes and behavior across social classes: Hoffman (1963), Kagan and Freeman (1963), Kohn and Caroll (1960), and Waters and Crandall (1964).

The point here is that most of the family interaction studies do not adequately take account of how child-rearing practices and attitudes vary across social classes. In many cases, specific child-rearing practices of parents of schizophrenics which are observed and labeled "pathological" by social scientists may simply be the typical parental behavior of parents in that particular social class. Such behavior, then, may not be etiologically significant to the degree often assumed by social scientists.

An example of this problem is evident in the study conducted by Kasanin, Knight, and Sage (1934). These researchers studied the case histories of 40 schizophrenics in order to determine the nature of the past relationships between this individual and his parents.
These researchers did not designate any control groups nor were the simple demographic and sociological characteristics of the study group described. Therefore, when the authors report that in 60 percent of the cases the attitude of the mother was one of overprotection or rejection, one does not know whether these findings are a product of the social class composition of the study group or if they are actually unique to the mothers of schizophrenics per se.

The relationship between ethnicity or religion and child-rearing attitudes and practices is also ignored by most family interaction studies.

For example, two early and often-mentioned studies of the families of schizophrenics were conducted by Gerard and Siegal (1950) and Tietze (1949). Gerard and Siegal found that in 57 percent of the cases, the mother considered the schizophrenic to be her favorite child. She spoiled, babied, and over-protected the child. Tietze, however, interviewed 25 mothers of schizophrenics and discovered that ten mothers overtly rejected the child while the other fifteen mothers subtly rejected the child. These findings, upon first glance, seem quite contradictory. However, Sanua (1961) closely scrutinized these studies and discovered that nearly 70 percent of Gerard and Siegal's patients were of Jewish and Italian sects and came from lower and lower-middle-class families while 64 percent of Tietze's patients were Protestants and came from the business and professional classes. Sanua speculates that the seeming contradictions between the findings of these two studies may be actually due to the differing social and ethnic backgrounds of the two groups.
He says: "It would be expected that in Jewish and Italian families there would be more babying of children, while such practices may not be considered proper in Protestant families of higher classes" (p. 249).

A similar situation arises in the interpretation of Clardy's (1951) findings that the majority of his sample of 30 mothers of young schizophrenics were anxious and domineering women. The problem here is that 15 of the mothers were Jewish and according to Rabkin (1965:318) several studies point out that these traits are considered to be representative, at least to a moderate degree, of most Jewish mothers. This makes for another problem of interpretation.

Again, Despert (1938) found that 19 of 29 mothers of schizophrenics were "...aggressive, over-anxious, and over-solicitous..." towards their future schizophrenic child (p. 370). However, 19 of the 29 mothers were Jewish. Despert does not give any analysis of his data according to the relationship between religion and the 19 "over-solicitous" mothers. His findings, therefore, are practically meaningless.

Studies which have validated the above mentioned hypothesis that posits that differences in child-rearing attitudes and practices exist across ethnic and religious groups are numerous. A few illustrative studies will be mentioned below.

McClelland, DeCharms, and Rindlisbacher (1955) found pronounced differences in child-rearing practices among various ethnic groups. For example, they found clear differences between Italian and Irish parents concerning their expectations of when the child should become independent from them.
Other major studies which find differences among ethnic and religious groups concerning child rearing included Barrabee and Von Mering (1953), Hitson and Funkenstein (1960), and Myers and Cushing (1936).

Another example of how a demographic or sociological variable can be differentially associated with some aspect of etiological research is the fact that several studies have found ethnicity to be associated with differential incidence and prevalence rates of mental disorder. For example, Jaco (1960) found significant differences of incidence rates among "Anglo-Americans," "non-whites," and "Spanish-American" groups.

Bagley (1971) analyzed data from an epidemiological study of mental illness in ethnic minorities in a London borough. He reported that ethnic minorities manifested different prevalence rates of schizophrenia among themselves and between themselves and the general population.

Ethnicity also seems to be differentially associated with the form and content of the psychotic symptom. That is to say, the manifestation of psychoses reveals itself in culturally specific symptoms. For example, Enright and Jaeckle (1963) studied the behavior of Japanese and Filipino paranoid schizophrenics in Hawaii. They found the Japanese patients to be more restrained and inhibited in their behavior than were the Filipino patients. This demonstrates how ethnic factors may be crucial in determining the form and content of abnormal behavior.
Eaton and Weil (1955) studied the Hutterite sect and concluded that cultural characteristics lead to culturally specific symptom manifestation and treatment regarding psychoses. Eaton and Weil report:

Hutterite mental patients with a variety of functional disorders reflected Hutterite cultural values in their symptoms of illness. There was little free-floating anxiety among the people who had grown up in this highly structured social system. Dominance of depression and introjection rather than acting out or projection of conflicts was found in both manic-depressive reaction and psychoneurotic cases. Nearly all patients, even the most disturbed schizophrenics, lived up to the strong taboo against overt physical aggression and physical violence. Paranoid, manic, severely antisocial, or extremely regressive symptoms were uncommon. Equally rare or completely absent were severe crimes, marital separation, and other forms of social disorganization. People had interpersonal problems rather than antisocial manifestations. Hutterites showed evidence of having aggressive impulses in projective tests, but these impulses were not manifested overtly as acts physically harmful to others. Human brutality may be found in most social systems, but it is not a functionally necessary behavior; its repression seems to be possible.

(p. 211)

Kluckhohn (1958) reports that after studying the family histories of "Old Americans," "Irish Americans," and "Italian Americans" it is clear that ethnic status does, indeed, affect the form and content of the manifestation of a psychotic disorder.

Opler and Singer (1956) analyzed the case histories and transcripts of intensive anthropological interviews of 77 schizophrenic males. Forty of these patients were Irish, while 37 were Italian. These researchers carefully controlled for age, education, length of hospitalization, intelligence, general socioeconomic status, and immigrant status. The results obtained supported the hypotheses that
in the Irish family, the mother instills in the child anxiety and fear of female figures while in the Italian families the more dominant father would instill hostility toward males. A second hypothesis, based upon the first, was also supported. It predicted that the Irish would manifest mental disorder in the form of extreme cases of latent homosexuality due to his fear of female figures. Italian patients, it was predicted, would be prone to "act-out" against male figures in a severe fashion. Both of these hypotheses were confirmed -- again demonstrating how ethnic group characteristics can mold the form and content of psychotic symptoms.

And finally, ethnicity has been reported to be associated with certain life attitudes which may be etiologically associated with the incidence of schizophrenia. For example, Bagley (1971) reports that "status striving in a climate of limited opportunity" is a characteristic of West Indians in a London borough and may be etiologically associated with schizophrenia. Dynes, et al. (1964) theorize that "marginal man" status (common for ethnic members in American society) may also be correlated with schizophrenia.

Another sociological variable often not controlled nor considered is age of the parents and other family members who serve as informants in the study. Approximately 50 percent of the studies reviewed for this thesis failed to control for age or provide information concerning the age of the informants. This is especially problematic with mothers in that mothers of different ages may have adopted different child-rearing philosophies simply due to the fact that, historically speaking, various child-rearing philosophies have
enjoyed popularity during a certain period and then may have been partially or completely replaced by a new philosophy. Therefore, if the age of the mother is not controlled in family interaction studies for both the study and control groups, it is possible that the differences found between these groups may be primarily a function of differential child-rearing philosophies of the mothers rather than some unique etiological factor associated with the incidence of schizophrenia. This concern is also clearly articulated by Sanua (1961:249).

This writer also found that in 20 percent of the studies reviewed, the sex of the schizophrenic subjects was not discussed. That is, no apparent efforts were made to control in the study design or data analysis for the sex of the subjects. This is problematic in that some studies (e.g., Fleck, et al., 1963) have reported that the types of pathological interaction patterns which characterize the families of schizophrenics may vary in degree and kind depending on the sex of the schizophrenic family member. Therefore, it is important that the sex of the index schizophrenic is considered in some manner.

Three well-known studies which failed to explicitly take into account the sex of the index subject were those conducted by Reiss (1967), Stabenau, et al. (1965), and Tietze (1949).

A third major problem, especially of a sociological nature, is that 90 percent of the family interaction studies do not examine how various social contingencies may affect the nature of the study group. Most studies analyze the parents and families of hospitalized
schizophrenics, yet little attention is given to various social conti-
ngencies which may differentially operate to bring only certain
individuals into the hospital setting. For example, different social
groups may have differential tolerance limits concerning deviant
behavior by their group members. Or, different ethnic or religious
groups may hold values which may make them more or less predisposed
to hospitalize someone for disordered behavior. These social con-
tingencies have been pointed out in these "classic" studies: Holling-
shead and Redlich (1958), Srole (1962), and Wanklin, et al. (1955).

In summary, Part 1 of this chapter has described three major
weaknesses of most family interaction studies. These weaknesses, it
has been argued, are especially repugnant to the sociologist in that
sociological factors have been ignored. The first weakness was that
90 percent of the family interaction studies analyzed by this writer
did not designate for study any demographically and socially compar-
able control groups. Secondly, it was found that 85 percent of
those studies which lacked control groups did not provide basic
information concerning a majority of the major demographic and socio-
logical characteristics of the study group. And, thirdly, 90 percent
of these examined studies did not discuss how various social con-
tingencies may have affected the composition of the study group.

Part 2: General Methodological Weaknesses of
Family Interaction Studies

Family interaction studies have usually derived their data
from these sources:
(a) Clinical and psychotherapeutic observations and impressions of family members in treatment or consultation.

(b) Retrospective accounts of child-rearing practices, attitudes, and familial interaction patterns obtained from family members' responses to interviews and questionnaires.

(c) Analysis of case histories compiled concerning the preschizophrenic and his family before the onset of the disorder.

(d) Systematic analyses of current patterns of interaction among family members.

(e) Analyses of psychiatric case histories compiled during and after the onset of the disorder.

Each of these data sources have serious weaknesses which are discussed below.

(a) Clinical and psychotherapeutic observations and impressions are tenuous for several reasons. First, rarely are control groups of normal or non-psychiatric patients, or non-schizophrenic psychiatric patients used. Secondly, the therapist or clinician often plays several different crucial roles in his relationship with the patient. Therefore, these relations between the researcher and the patient may affect the patient's behavior and responses in "unnatural" ways. Thirdly, most psychotherapeutic treatment programs are conducted with middle and upper-class patients. Little has been done with the lower-class patient and his family -- the very group which is said to have the greatest prevalence of mental disorder.
A fourth problem, of considerable magnitude, is that there is some evidence that many of the basic concepts used by psychotherapists to describe familial characteristics of schizophrenics have limited specific meaning concerning schizophrenic families. For example, Jackson, et al. (1958) asked 20 prominent psychiatrists who had worked intensively with schizophrenics and their families to perform two Q sorts on 108 statements describing certain characteristics of the mother and father of the schizophrenic. Factor analysis was executed and three factors for each parent were isolated. The six factors were said to represent the general consensus of psychiatrists concerning the characteristics of these parents. However, when these factors were compared to the factors isolated from a similar Q sort analysis of families of 20 autistic and 20 neurotic children, the three sets of families could not be differentiated using these concepts. Here the concepts of psychiatrists have been shown to have limited specific meaning. They are simply too broad in meaning.

A fifth problem with this approach is articulated by Cornelison (1960:88). She points out that, based on her impressions and observations, a series of psychotherapeutic sessions with the entire family may change even the most basic of the interaction patterns of the family. Therefore, psychotherapeutic observations may be reporting data not truly representative of the interactional patterns of the past.
A final weakness worthy of mention here is that these kinds of data are almost always presented in a very non-standardized and qualitative manner. Conceptual terminology and methods of data organization and presentation vary from study to study making the results non-comparable.

(b) Retrospective accounts of child-rearing practices, attitudes, and familial interaction patterns obtained from family members' responses to interviews and questionnaires suffer from the following weaknesses.

The most frequently used questionnaires in family interaction studies have been the Parental Attitude Research Instrument (Schaefer and Bell, 1958) and the University of Southern California Parent Attitude Survey (Shoben, 1949). These scales usually present some opinion such as "children should be seen and not heard" and the parent is asked to agree or disagree along a four-point scale of intensity. The problem with such an approach is that what are measured are present attitudes. The connection of these attitudes to former attitudes (i.e., before the onset of the disorder) is unknown. A second problem is that, even if these present attitudes are representative of previous attitudes, the connection between stated attitudes and overt behavior is unknown. Gordon (1957) and Leton (1958) investigated this latter problem and concluded that there is little relationship between what attitudes parents express using the Shoben scales and in what behavior they can be observed to engage.

Another problem with these questionnaires is their limited capacity to differentiate between parents of schizophrenics and
parents of normals and other psychiatric patients. For example, Zuckerman, et al. (1958) found that when controlling for social class, religious, and age differences among the parents, the Parental Attitude Research Inventory did not readily differentiate these various groups. Freeman and Grayson (1955) conducted an item analysis of the responses they obtained on the Shoben scale and found that the responses of mothers of schizophrenics and normals could only be differentiated on fourteen items (out of 148 items in all). And then, the overlap of these items was quite extensive making the differences found even more questionable. The limited ability of these scales to differentiate schizophrenic parents and families from other groups may be a weakness of the scales or may reflect real lack of differences between these groups. This former interpretation must be given serious consideration and study before the validity of these scales can be assumed to be adequate.

Interviews have also been used to obtain data in this area. For example, Tietze (1949) interviewed mothers of schizophrenics, Kohn and Clausen (1956) interviewed schizophrenic patients, and Lidz, Fleck, and Cornelison (1965) interviewed both parents and other friends and relatives. This technique suffers from some of the same problems of the questionnaire technique (e.g., problems concerning the connection between present and past attitudes and questions concerning the connection between attitudes and overt behavior). Other problems are discussed below.

First, interview studies are subject to various subject and experimenter biases. For example, a respondent might be influenced
by examiner characteristics to respond in certain ways. Or, the respondent may feel compelled to offer a "socially acceptable" response. Or, respondents may become defensive or use selective remembering and forgetting of facts, selective distortion of facts, rationalizations, reaction formations and other psychological mechanisms designed to help them adjust to the inquiry of the interviewer.

As Clausen and Kohn (1960) report:

To the extent that coping with the schizophrenic illness of a family member is a stress quite different from those normally encountered, and to the extent that surveillance of a family is likely to lead to some masking techniques, one wonders whether the cards are not somewhat stacked against obtaining ... data that can be used to construct an adequate picture of the family prior to the onset of schizophrenia. (p. 312)

Secondly, it is often assumed in interview studies that people conceptualize their lives in terms of the language used by the researcher. Therefore, it is assumed that the subject understands exactly what the researcher is asking. These assumptions are open to question. For example, McGraw and Molloy (1941) interviewed mothers twice concerning their recollections of the developmental history of their children. The first interview was based on generally stated questions (using general concepts) whereas the second interview, one month later, was more detailed and specific in its questioning. It was found that the latter interview session yielded the most accurate reports based on a comparison with reports compiled during the child's history by staff psychiatrists. Simply, the more specific the questions asked in interview settings, the less chance of securing very general and irrelevant information which is a product of the general and often misunderstood questions asked by the
researcher.

(c) Analysis of case histories which were compiled concerning the pre-schizophrenic and his family before the onset of the disorder are subject to question because of the lack of detail concerning important matters which may characterize many of the histories. Because these histories were compiled for various reasons (because of chronic laziness, or "acting-out" behavior, or slowness in learning, etc.), varying degrees of effort may have been given to obtaining information on matters which have special theoretical significance in regards to family interaction theories concerning the etiology of schizophrenia. And, if only "complete" or "detailed" files were analyzed, a sample bias of unknown dimensions may obviously influence the composition of the study group and the findings obtained.

(d) Systematic analyses of current patterns of interaction among family members are also subject to several questions.

The typical approach here is to bring together two or more family members and observe and classify their behavior as they attempt to complete some assigned task. For example, see Farina (1960), Garmezy, Clarke, and Stockner (1961), and Reiss (1967). Most of these studies are concerned with the content of the interaction. Attempts are made to classify it as conflicting or harmonious, rigid or flexible, etc.

One of the major problems with this approach is the possible variability of observer inferences concerning the behavior being coded. For example, when the Bales (1950) technique is being used, the observer must make the crucial judgment of what is primarily
Another problem with this technique concerns the representativeness of the behavior being analyzed. That is, are the situations being observed representative of other "typical" family situations so that "typical" interaction patterns may be observed and analyzed? And even if these patterns are representative of present family patterns, it is questionable if these same patterns of interaction characterized the family before the onset of schizophrenia.

These studies are also of limited value because their findings are often presented in qualitative fashion with little precise organization of the data. And, the non-comparability of the tasks designated for completion make for much difficulty in comparing findings across studies.

Another method occasionally used to analyze current interactional patterns is to administer various psychological tests to family members. To date, the Rorschach and the Thematic Apperception Tests have been the most frequently used tests in family interaction studies. Again, a problem with such a response-evoking technique is that the relationship between the attitude and one's actual behavior is unknown. And, projective techniques may be questioned as to their validity (see Anastasi, 1968:513-516; and J. G. Harris, 1960) and reliability (see Anastasi, 1968:512-513).

(e) And finally, family interaction studies which are based on the analyses of psychiatric case histories compiled during and after the onset of the disorder are weak in that the data collected may not be detailed enough for a later evaluation by an independent
researcher. Or, the data may not include information concerning cer­
tain areas of specific theoretical interest to the researcher pur­
suing the etiology of schizophrenia.

Studies of this nature usually require that only "complete" and "detailed" case histories be used. This acts as a major selec­
tive factor in the process of preparing a sample. For example, 
Kasanin, Knight, and Sage (1934) required that only "...good his­
tories of early childhood" and parent-child relationships be analyzed 
(p. 251). Wahl (1954) rejected 60 percent of his originally selected 
cases because of incomplete data.

Concerning this possible selective factor, Kasanin, Knight 
and Sage (1934) readily recognize it and offer an interpretation of 
its impact upon the data gathered. These researchers report that 
overprotective mothers tend to remember best and offer the most 
detailed social histories concerning their child simply because they 
are overconcerned and, in essence, overprotective. This, of course, 
biases the sample of case histories if the criterion for selection 
is detailed case histories. This situation, continue Kasanin, Knight, 
and Sage, may explain why studies constantly find overprotective 
mothers associated with the incidence of schizophrenia.

Another problem with psychiatric case histories is that the 
reported "facts" concerning the subject have often been recorded 
through the eyes of a psychoanalyst. Therefore, many simple life-
events have been translated into psychoanalytic jargon and conceptual 
schemes making interpretation difficult for independent researchers 
with a less psychoanalytic perspective.
Case histories are also questionable in that only one informant (usually the mother) has been the source of the content of the case history. Little or no effort is made to get information from other relevant informants or to even attempt to validate what has been offered by the single informant.

And, finally, another problem with many case history reports is that they are based on very brief and superficial interviews with only one or two informants. It is questionable if accurate information can be secured from such small-scale efforts. For example, Ernst (1956) reported that while he was studying 50 schizophrenic women, he found eight who, according to hospital psychiatric case histories based on brief interviews, came from normal homes. Yet, upon visiting these homes and conducting intensive studies, he found that the homes were all quite stressful.

The previous pages have been devoted to a discussion of certain problems which are specifically characteristic of the various kinds of data sources which are used in family interaction studies. Other general methodological problems characteristic of family interaction studies are discussed below.

(1) Weaknesses of retrospective studies. Studies which attempt to reconstruct a history of past events must usually rely upon the recollections of individuals with whom the pre-schizophrenic had intensive social contact. Reliance upon one's memory, of course, raises the question of possible distortions of what is recollected. Simple forgetting, or defensiveness resulting in selective remembering
or forgetting, or the remembering of "second-hand" reports as "first-hand" reports may all lead to inaccurate accounts of the subjects' social history. Various studies have documented the hypothesis that mothers are unable to recall accurately the details of significant behavioral and developmental events in the lives of their children (e.g., Haggard, Brekstad, and Skard, 1960; Yarrow, Campbell, and Burton, 1964, 1970). A classic study of this type was conducted by Jayaswal and Scott (1955). These authors compared the parental and teacher descriptions of the child's personality (which were secured when the subject was a child) with retrospective accounts of the same concerns secured from these same mothers many years later. These researchers found little consensus between the two reports, thus demonstrating the questionable validity of retrospective accounts.

(2) Failure to distinguish between "childhood" schizophrenia and "adolescent" and "adult" schizophrenia. Unfortunately, when family interaction studies are reviewed so that the "direction of evidence" may be determined, little consideration is given to the varying age of onset of the disorders which characterize the subjects used for each study. This same problem is evident in the "review of the literature" section of most studies. For example, in Frank's (1965) detailed review of several family interaction studies, he includes studies such as Perr's (1958) which study the families of "autistic children" (ages five to nine years) and Behrens and Goldfarb's (1958) which used as subjects the families of "childhood schizophrenics" (mean age, 8.8 years) while many other studies which
were included investigated the family interaction histories of those who did not manifest mental disorder until late adolescent or early adulthood.

The problem here is that these review efforts, which often attempt to make generalizations from the findings of these various studies, do not consider the evidence which suggests that "childhood" schizophrenia (or "autism" and "early infantile autism") may be significantly different in degree and kind from "adolescent" or "adult" schizophrenia.

For example, Eisenberg (1968) conducted a follow-up study of several children who were diagnosed as "autistic" during their childhood. He discovered that the clinical symptoms of these subjects in adulthood were not identical with those symptoms which generally characterize adolescent and adult schizophrenics. Eisenberg also reported that:

Other follow-up studies of psychotic children have encountered increasing evidence as follow-up time lengthened that children originally described as "psychotic" or "schizophrenic" later presented frank evidence of neurological impairment. (p. 403)

In short, one cannot be sure that "childhood" schizophrenia and "autism" are similar to "adolescent" and "adult" schizophrenia. Therefore, to interchange the findings of these studies using dissimilar subjects to support a specific etiological theory is an error of major proportions.

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The review of the studies upon which this thesis is based revealed that several studies which were constantly mentioned in the literature as "major" and "classic" etiological studies used childhood schizophrenics and autistics as their subjects. For example, "childhood schizophrenics" and their families were studied by Behrens and Goldfarb (1958) (mean age of the subjects, 8.8 years); Block (1969); Boatman and Szurek (1960) ("most" under 12 years of age); Despert (1938); Kaufman, et al. (1960) (ages 6-17 years); Klebanoff (1959); and Lennard, Beaulieu, and Embrey (1970). "Autistics" and their families were studied by Block, et al. (1958), and Eisenberg (1957).

(3) Failure of ninety percent of these studies to consider the reactive-process dichotomy in the study design or data analysis. There is considerable agreement among psychologists, psychiatrists, and social workers that there are two distinct types of schizophrenic syndromes. The "reactive" syndrome (also termed "acute" or "good premorbid") refers to an individual who has appeared generally normal throughout his life until the sudden appearance of schizophrenic symptoms and subsequent hospitalization and/or treatment. In contrast, the "process" syndrome (also termed "chronic" or "poor premorbid") refers to an individual who has consistently displayed somewhat abnormal personality characteristics (such as seclusiveness and "out-of-context" behavior) during most of his life. This abnormal behavior usually increases in severity until hospitalization and/or treatment is required.
Because the social histories of these two types of schizophrenic individuals are so different, it is reasonable to speculate that the interaction patterns which characterized the homes of these individuals may be significantly different. There is some evidence for this hypothesis. For example, Rodnick and Garmezy (1957) found that process schizophrenics reported that their mothers were dominating, restrictive, and powerful, whereas reactive schizophrenics reported that the father was dominating, harsh, and oppressive. In 1959, Garmezy and Rodnick again confirmed these findings in another study. Farina (1960) used a similar breakdown and confirmed the same findings.

Several other researchers are convinced that a process-reactive distinction is crucial in a study of schizophrenics. For example, Becker (1959) reviewed ten studies which support this division, and he concluded that there is without doubt a need to distinguish between these two types. Maler (1966) reviewed literature from sociology, psychology, and biology and concluded that, with very little doubt, such a life-history distinction is indeed indicative of different personality characteristics, treatment responses, and social history experiences. Winder (1960) reached the same conclusion. And finally, Herron (1962) reviewed all available studies on the process-reactive dichotomy and concluded:

This review of all research on the process-reactive classification of schizophrenia strongly indicates that it is possible to divide schizophrenic patients into two groups differing in prognostic and life-history variables. Using such a division it is also possible to demonstrate differences between the two groups in physiological measures and psychological dimensions. (p. 342)
In summary, although there is considerable evidence that schizophrenic syndromes should be classified as either process or reactive, 90 percent of the family interaction studies reviewed did not use samples homogeneous on this variable or data analysis techniques which report separate data for each diagnostic type.

(4) Failure of sixty percent of these studies to discuss the operation of various selective factors in the construction of the samples. Numerous studies suffer from the problem of selective factors which may bias the response tendencies of the final sample. Several studies, for example, did not offer information concerning how their sample was selected nor did they report or even attempt to determine the characteristics of those who refused to participate. Therefore, a "willingness to cooperate" bias may have been in operation in many of these studies. As Clausen and Kohn (1960) point out, those parents who are willing to cooperate in a research effort may be better organized and have less conflict than other parents. Or, such parents may actually have more serious problems than those who refuse to participate. Therefore, they are eager to expose their problems with the hope that they will be helped to solve these problems. Whichever the case, more information about those not included in the study is needed in order to determine how the obtained sample may be unrepresentative of schizophrenics and their families in general.

It is also important to know how a study group and a control group may differ in regards to their perception of the experimenter's
request for participation. For example, it may be theorized that families of schizophrenics agree to participate in a research project because they hope that such a project may help their child. On the other hand, "normals" who participate as controls may perceive the project as a test of their mental health. Therefore, the normals might be more defensive and guarded making the abnormalities of the family of the schizophrenic seem more pronounced than they would be if the controls offered information openly. Cheek (1964a) somewhat supports this hypothesis in that she found that mothers of normals tended to be more ego-defensive than mothers of schizophrenics. And, in 1965, Cheek documented this tendency for fathers of normals and schizophrenics as well.

Other possible selective factors may also be present in the form of various "requirements" for inclusion in a sample. For example, Kasanin, Knight, and Sage (1934) required that only "good histories of early childhood" and parent-child relationships be analyzed (p. 251). Wahl (1954) rejected 60 percent of his originally selected case histories because of incomplete data. Witmer, et al. (1934) required that interviews only be conducted with "presumably intelligent informants" (p. 356) who were also "cooperative" (p. 293), and Tietze (1949) required that all her interview subjects be "intelligent and articulate" (p. 55). All of these "requirements" may act as selective factors which may bias the response tendencies of the sample studied. Unfortunately, family interaction studies suffer from these problems and little attempt has been made to eliminate or even determine exactly how these factors bias a study's findings.
(5) It is difficult, if not impossible, to be sure that the family interaction patterns discovered are a cause rather than a consequence of abnormal behavior manifested by a family member. This is probably the most serious problem characteristic of ex post facto studies of this nature. This is a problem facing almost all family interaction studies.

Two basic questions may be raised here. First, one must wonder if recorded family interaction patterns are a response or a reaction to the fact that some family member has been labeled as mentally ill and placed under psychiatric treatment. And/or, it may be possible that the family interaction patterns discovered may have been a response to the initially disordered behavior of some family member even before the labeling and treatment sequence had begun.

Clausen and Kohn (1960), National Institute of Mental Health (1971:21), White (1956), Winder (1960), and Wing (1964) all pointedly raised these questions. For example, White (1956) points out that:

...We must certainly begin to consider the effects of the child's attitudes on the parents. Do overprotective mothers choose dominative or indulgent roles out of their own preference, or does the child's docility or activity force these roles upon them? Do infants show from the start persistent differences in level of activity and in responsiveness to the mother's ministrations? (p. 151)

There have been several studies which have supported the hypothesis that many familial and parental characteristics are a response to the initial behavior of the child. For example, Bell (1970) conducted an extensive review of studies concerning child socialization. He discovered 58 studies which present considerable evidence that the initial behavior of the child can shape parental attitudes and
behavior rather than vice-versa. His review was quite extensive and he offered a convincing argument for this "responsive" interpretation of family interaction study findings.

Chess, Thomas, and Birch (1959) conducted a longitudinal study of 85 children seeking to determine if some parental-child practices could be a response to initial "reaction patterns" characteristic of the child. These researchers found that:

...the individual, specific reaction pattern appears in the first few months of life, persists in a stable form thereafter and significantly influences the nature of the child's response to all environmental events, including child care practices. (p. 793)

This "reaction pattern," report Chess, et al., is composed of several possible categories of behavior such as activity-passivity, regularity-irregularity, and approach-withdrawal which may characterize the child from birth. And, these general behavioral tendencies have important implications for most of the child's behavior -- including playing, toilet training, sleeping, and feeding. Chess, et al., conclude that these findings indicate that "...the omnipotent role of the parent in the shaping of the child is indeed a destructive illusion" (p. 801). Simply put, a parent's behavior towards the child may be a response to the initial behavioral tendencies of that child. Similar studies conducted by Fries and Woolf (1954) and Klatskin, Jackson, and Wilkin (1956) reached the same conclusion.

Clausen and Yarrow (1955) describe in detail how families may reorganize themselves (and their behavioral patterns) after one family member has been labeled as "sick" mentally. Here the response of the family to the labeling process is under study. Because of
such response patterns, results of ex post facto family interaction studies may be a product of the impact of the labeling process upon the family -- not an indication of previous interaction patterns which may have been etiologically associated with the incidence of schizophrenia.

Escalona (1948) intensively studied the case histories of seventeen psychotic children treated at the Menninger Clinic and reached the following conclusions:

Wherever the life histories of severely disorganized children were given adequate scrutiny, it was noted that disturbances in the earliest and most basic interpersonal relationships were present.... Furthermore, most of the mothers or other persons in close contact with these children, spontaneously commented that there was something puzzling and "different" about these children from a very early age on.

...From experience with non-psychotic children it is well known that behavior deviations of the kind just enumerated are often produced by parental attitudes. Hence, it is easy to assume that in these severely disturbed children, maternal rejection is at the root of the trouble. Yet, the more one studies the early life history of psychotic children, the more one is impressed with the atypical and pathological reaction of the children to perfectly ordinary maternal attitudes and to the inevitable daily routines.... (p. 133)

Escalona went on to report that these early problems with the child may have been due to child developmental irregularities of a constitutional nature such as immature development of the nervous system, problems with respiration, and other body systems. These initial problems with the child may have elicited certain behavioral and attitudinal responses from the mother.

Fleck, et al. (1957a) report, based on their studies, that:

The schizophrenic illness of a family member can change the tenuous equilibrium of the family and precipitate disorganization that deprives its members of emotional support from each other just when they need it most. (p. 123)
Thus, the familial disorganization often detected in family interaction studies may be due to the impact of the illness upon the family -- a consequence, not a cause, of the illness.

Margaret Fries (1914+) reported significant variations in the physical activity levels of one- to ten-day-old infants which were still observed five years later. Therefore, maternal behavior, it was theorized, may be a response to these child behavioral patterns. For example, some children were extremely active -- constantly testing the patience of the mother. Such a situation could elicit restraining or hostile behavior from the mother. Some children were also discovered to be constantly passive. Here the mother might react by being overcontrolling and manipulative.

Heath (1960) reports findings similar to the above. He says that: "Findings in our own clinic suggest that the child's behavior is at least as important as the mother's in inducing pathological family relationships" (p. 150).

And finally, O'Neal and Robins (1958a, 1958b) conducted a follow-up study of children who were seen 30 years before in a child guidance clinic. Based on a standardized interview schedule, 28 of 85 subjects who later developed schizophrenia were compared to those who did not develop schizophrenia on several psychological and physical history dimensions. These researchers report that schizophrenics had significantly more infectious diseases in the first two years of life than the "normals". Schizophrenics also suffered from more physical handicaps such as hearing problems, disfigurement, locomotion difficulties, feminine appearance, and poor motor skills. It
is logical to theorize that such "initial characteristics could have elicited certain response patterns (such as overprotective tendencies) from the mothers which may have stabilized over time.

In conclusion, family interaction studies fail to settle the question: "Are these detected family interaction patterns a cause or consequence of the behavior of someone who is at some time diagnosed as schizophrenic?"

(6) Family interaction researchers fail to eliminate alternative interpretations of their study findings. Therefore, the hypothesis that the necessary and sufficient conditions for the incidence of schizophrenia are found in family interaction patterns has not been validated. Most family interaction researchers agree that present studies have isolated several hypothetically necessary but not sufficient conditions for the incidence of schizophrenia.

Several researchers have admitted that their findings may be used to support other etiological hypotheses — especially the genetic hypothesis. Clausen and Kohn (1960) report:

Parental personalities showing gross pathology antedating the child's birth could support equally well a genetic or a psychogenic explanation of the schizophrenia. The fact that not all children in these families are schizophrenic suggests that parental pathology is not enough. Some interaction between genetic susceptibility and a social matrix within which the child is impaired in efforts to achieve a viable identity seem most probable. (p. 309)

Lidz, et al. (1958b) also discussed this problem:

Of course, the presence of poorly organized or disorganized parents can just as well be taken as evidence of a genetic strain that transmits schizophrenia. Indeed, we have probably found more evidence of mental illness
among parents and in other relatives than any study of
the genetic factors of schizophrenia. At this time we are
describing what exists in the family rather than explain­
ing how it came about. According to our concepts of human
development, such distortions of reasoning are more explic­
able through extrabiological transmission of family charac­
teristics than through genetic endowment. However, we need
not seek a solution with an "either-or," for, as with many
other conditions, both genetic and environmental factors
may well be involved. (p. 187)

(7) Family interaction studies dealing with schizophrenics
often do not produce findings which are significantly different from
those obtained by family interaction studies dealing with several non-
schizophrenic populations. In short, there is considerable evidence
that the findings of family interaction studies concerning schizo­
phrenics are not specific nor unique to the schizophrenic group.

To illustrate this problem, consider the trait of parental
rejection. Reichard and Tillman (1950) found that the mothers of
schizophrenics rejected their pre-schizophrenic child. However,
Bolles, Metzger, and Pitts (1941) found that the parents of neurotic
children were rejecting as well. Hewitt and Jenkins (1946) and
McCord and McCord (1956) reported that the parents of delinquents
were also rejecting towards their child. And finally, Miller and
Baruch (1948) found that the mothers of allergic children were charac­
terized as rejecting.

George H. Frank (1965) reviewed fifteen studies of the fami­
lies of those labeled neurotic and five studies of the families of
those labeled behavior disorders and concluded that these study find­
ings were similar to the findings of family interaction studies con­
cerning schizophrenics. Frank reports that the families of neurotics
and behavior disorders were characterized by "...maternal overprotectiveness, maternal domination, maternal rejection, deprivation and frustration, and the mothers fostering an almost symbiotic relationship between themselves and their children" (p. 202). Frank reported that these studies found the mothers of neurotics to be overprotective towards the child: Holloway (1931), Jacobsen (1947), and Zimmerman (1930). Maternal domination in families of neurotics was reported by Mueller (1945) while maternal rejection in these families was found by Ingham (1949), Newell (1934, 1936), and Silberpfennig (1941). Such findings are similar to those reported for the families of schizophrenics.

Brown (1967) conducted a review of the literature concerning the parents of homosexuals and concluded that:

In summary, then, it would seem that the family pattern involving a combination of a dominating, overtly intimate mother plus a detached, hostile, or weak father is beyond doubt related to the development of male homosexuality. (p. 300)

Again, these traits which are said to characterize families of homosexuals are also reported by family interaction studies concerning schizophrenics. The findings do not seem specific to any one group. Therefore, it is questionable if these traits are of specific etiological significance in regards to the incidence of schizophrenia.

Several other studies have attempted to make direct comparisons between the families of children in different categories of psychopathology. Here these various groups are directly compared within the same study. Such efforts have been conducted by Baxter, Becker, and Hooks (1963); Fisher, et al. (1959); Frazee (1953);
Freeman, Simmons, and Bergen (1959); Friedlander (1945); McKeown (1950); Oltman, McGarry, and Friedman (1952); Pollock and Malzberg (1940); and Pollock, Malzberg, and Fuller (1936). Such studies again reveal no significant or consistent differences in the interactional characteristics of these families.

To illustrate, Fisher, et al. (1959) compared the Thematic Apperception Test and Rorschach Test protocols of the parents of schizophrenic patients and those of hospitalized neurotics and normals. They found no significant difference between the results for the parents of schizophrenics and neurotics although both differed in the same general way from the protocols of the parents of normals.

In sum, most of the results of family interaction studies concerning schizophrenics are not specific to schizophrenic families. This is a major problem which challenges the assumption that specific family interaction patterns are etiologically associated with a specific disorder -- schizophrenia.

(8) The data gathering efforts which characterize most family interaction studies are often too brief and superficial to yield detailed and accurate data. For example, Gerard and Siegel (1950) conducted single interviews with the mother and the father of schizophrenic patients. Each interview lasted an average of one and one-half hours. From these interviews these researchers present several "findings" concerning the social history of the patient. It seems doubtful to this writer that adequate rapport can be established in a one and one-half hour session which would permit the asking of
crucial personal questions and receiving of honest, accurate responses. Also, it seems impossible to accept the notion that all that is important concerning the child's social history can be discovered in one and one-half hours. This observation by Lidz, Fleck, and Cornelison (1965) seems relevant here:

> Although one can gain an impression of a family from a few interviews, it was the experience of our group, probably as skilled as most investigative teams, that we arrived at some very erroneous concepts unless the work continued for many months. (p. 24)

In short, family interaction studies should be based on extensive and intensive data gathering techniques and sources. Unfortunately, most of the studies reviewed by this writer were not extensive and intensive in this regard.

(9) Family interaction studies generally lack a unified conceptual approach to the study of the family. Therefore, conceptual schemes, taxonomies, and theoretical focal points vary from study to study making it questionable if the results obtained are comparable as to meaning and context. Ackerman (1956b), Bannister (1971), Boatman and Szurek (1960:51), Bowen (1960:39) and Lidz and Fleck (1960) are major researchers who discuss this problem. What seems to be needed is a theory concerning the family which is continually validated and modified so as to form a solid base for diverse research efforts.

(10) The criteria used to diagnose someone as schizophrenic vary from person to person, place to place, and from time to
As pointed out in Chapter III of this paper, this variability makes it questionable that every family interaction study which analyzes the family of "schizophrenics" is analyzing the same kind of population. Approximately 70 percent of the family interaction studies reviewed did not attempt to minimize this problem by reporting in detail how their sample was selected and how the subjects were determined to be "schizophrenic." For example, Despert (1938), Kasanin, Knight, and Sage (1934), Pollock, Malzberg, and Fueller (1939), and Witmer, et al. (1934) give absolutely no information concerning this question. More recent studies, however, have attempted to reduce diagnostic variability by checking the patient's symptom history to be sure that the patient has consistently displayed severe forms of behavior and thought which are considered to be identifiable as "classical" symptoms of schizophrenia. For example, Stabenau, et al. (1965) had their originally selected "schizophrenic" subjects re-diagnosed by two psychiatrists who were specifically looking for manifestations of severe forms of the "classical" symptoms of schizophrenia.

(11) Ninety percent of the family interaction studies reviewed for this paper failed to control either within their study group or across study and control groups for any of the following four variables:

3The following studies have empirically supported this statement: Arnoff (1954), Bannister, Salmon, and Leiberman (1964), Freudenberg and Robertson (1956), Hoch (1957), Hunt and Jones (1958), Kreitman (1961), Mehlman (1952), Pasamanick, Dinitz, and Lefton (1959), Penrose (1950), Shakow (1963), and Wittenborn, Holzberg, and Simon (1953).

4These "classical" symptoms were originally described by Bleuler (1950) as ambivalence, fragmentation of thought and affective disturbance.
which may influence the findings obtained: (1) birth position of the schizophrenic child; (2) length of hospitalization of the schizophrenic subject; (3) size of the schizophrenic's family; and (4) loss of a parent or parents by a child.

First, birth order position of the schizophrenic child is usually not held constant within a sample or it is not considered in the data analysis. There is some evidence (e.g., Schooler, 1961, 1964) that schizophrenia may disproportionally manifest itself in children holding a certain position in the birth order. For example, Schooler found that female schizophrenics disproportionally came from the last half of the birth order regardless of social class, whereas last-born male schizophrenics disproportionally came from the middle-class families and first-born schizophrenics from low-class families.

Secondly, most studies fail to report or discuss the possible influence of the length of hospitalization of the schizophrenic subject upon the study findings. Here again, the study groups are not homogeneous regarding this variable nor do the researchers attempt to control for the effects of this variable in their data analysis and presentation. Clausen and Kohn (1960:298-304) discuss this problem based upon the findings of their Hagerstown study. These researchers discovered that patients who were hospitalized for brief periods of time had families characterized by different social and psychological patterns than those families of chronic and continually hospitalized patients. Rennie (1941) found that long-term hospitalization was correlated with a slow "process" development of the disorder.
In short, the length of hospitalization may be correlated with other significant factors which may influence study findings. Therefore, hospitalization length should be controlled or at least considered in the interpretation of the data.

Length of hospitalization might also be controlled for a second reason. It seems reasonable to theorize that the length of the schizophrenic's hospitalization may influence the family interaction patterns detected by these family-oriented studies. For example, a family which has recently had one of its members placed in a mental hospital may react with considerable social disorganization and confusion, whereas the family of a patient who has been institutionalized for several years may be characterized by stable interaction patterns due to their "resigned" attitude about the patient's disorder. Again, length of hospitalization should be controlled or at least considered by family interaction researchers.

A third variable which should be considered in the data analysis or research design is family size. It is possible to construct several plausible theories about the influence of family size upon the development of schizophrenia. For example, it may be theorized that the more children there are in a family, the less direct contact each child may have with the parents. If the parents provide a source of identity for the typical child in that parents act as role models for the children, a large family may make it less likely that a child will experience sufficient closeness to the parents so that a stable identity might develop. Wahl (1954, 1956) presents evidence that may be used to support such a hypothesis.
However, other interpretations may be valid as well. The point here is that the possible affects of family size upon the probability of the development of schizophrenia needs to be specifically analyzed and possibly controlled in family interaction studies.

And finally, researchers should attempt to eliminate the possible differential influences of "parental deprivation." This term refers to the loss of a parent or parents through death, separation, divorce, physical illness, or employment which constantly keeps a parent away from the home. Again, researchers should strive to either make their samples homogeneous concerning this variable or attempt to determine the influence of this variable in the data analyses.

Several studies have supported the thesis that parental deprivation is significantly related to the incidence of schizophrenia. Gregory (1958) reviewed and critiqued over 30 studies which have examined the life histories of psychotics in regards to the degree of parental deprivation characteristic of these families. Gregory concluded that an unusually high frequency of parental deprivation does indeed characterize the childhoods of these psychotics. It was found that the most severe cases of parental deprivation occurred when the child was between the ages of seven and ten.

Hilgard and Newman (1963) found a greater frequency of schizophrenics suffering early maternal loss by death than did a non-patient community control group.

Wahl (1956) reported that 41 percent of 568 male schizophrenic patients in the United States Navy had lost a parent (usually the
father) by death, divorce, or separation before the age of 15 years. He also found that 18 percent had lost both parents before the age of 15 years. These percentages were four times greater than those reported for the general population.

And finally, Yerbury and Newell (1943) studied the histories of 56 psychotic children and found that parental deprivation characterized the lives of many of these children. For example, 14 of the children lost their mother either through death or hospitalization at a very early age.

In short, if parental deprivation is not held constant nor considered in the data analysis of family interaction studies, the results obtained may be more a function of this factor rather than a function of various interaction factors.

(12) The possibility that parental attitudes and behavior may change and fluctuate during the childhood of the schizophrenic is not explicitly considered in 95 percent of these family interaction studies. Nor are efforts made to determine what were the interaction patterns prevalent in a family at different times or stages of the pre-schizophrenic child's development. And, little discussion of these matters is presented.

The seriousness of these problems is demonstrated by Baldwin's (1946) study which discovered changes in the parental attitudes as the child grew older. Lasko (1952) discovered that the behavior of the mother is constantly changing as the mother becomes increasingly accustomed to her role as mother and to the unique behavior of her child.
(13) The great majority of family interaction studies have problems concerning the reliability of the ratings and evaluations of family interaction patterns which are made by the study researchers. A general problem of reliability characterizes family interaction studies because researchers and others who evaluate the family behavior do so in terms of psychological and social-psychological concepts. The use of such concepts is problematic in that they are generally subject to considerable variation in terms of meaning and interpretation across researchers. Terms such as "covert" and "overt rejection," "double-bind message conveyance," and "pseudo-mutuality" may be used by several researchers but yet vary in the definitions given to these concepts by these researchers.

In regards to inter-rater reliability within studies, only one researcher (McKeown, 1950) reported a low inter-rater reliability correlation. McKeown found an inter-rater reliability among four judges to be only 67.2 percent when their task was to evaluate parental behavior concerning several behavioral dimensions. Of the remaining 139 purported family interaction studies analyzed, over 50 percent of those studies which used judges of some sort presented absolutely no information concerning the number of such observers nor were inter-judge reliability figures presented.

(14) The findings of family interaction studies are often either (1) contradictory or (2) so wide in scope that it becomes difficult, if not impossible, to construct a unified theory depicting specific interaction patterns of families which may be etiologically associated with the incidence of schizophrenia.
Contradictory findings across studies are numerous. For example, most family interaction studies which focus on the father of the schizophrenic conclude that he is generally passive, ineffectual, withdrawn and does not act as an adequate role model for his son. Frazee (1953), however, reported that the fathers of schizophrenics which he studied were overtly cruel and rejecting -- not passive and ineffectual. Caputo (1963) found that contrary to the findings of many studies, the fathers of schizophrenics were over-dominating while the mothers were passive and ineffectual.

Several family interaction studies have failed to find any significant interactional differences between families (or specifically parents) of schizophrenics and normals. For example, see Baxter, Becker, and Hooks (1963), Fisher, et al. (1959), Freeman and Grayson (1955), Hotchkiss, et al. (1955), Schofield and Balian (1959), and Zuckerman, et al. (1958). Such studies, of course, raise the question of the validity of those studies which do report significant differences.

The diversity and breadth of these findings is also problematic. Although the great majority of these family interaction studies conclude that "interactional abnormalities" do seem to characterize the families of schizophrenics, the actual types of abnormalities reported vary considerably across studies. That is to say, so many different types of attitudinal and behavioral orientations have been attributed to the members of families containing a schizophrenic that it seems likely that almost anyone who displays some form of overt repetitive social behavior might be readily identified as one who is
somehow related to a schizophrenic. In short, the types of these "pathological" interaction patterns which have been "discovered" by researchers are too numerous to serve as a basis for a parsimonious etiological theory which is specific for schizophrenia.

An example of the diversity and breadth of these findings was provided by Coleman (1964) who reviewed fifteen studies\(^5\) (p. 293). He reported that the studies which have studied mother-preschizophrenic child interaction patterns in detail report that the mothers of schizophrenics have been found to be: (1) rejecting; (2) dominating; (3) cold; (4) overprotective; (5) insensitive to feelings and needs of others; (6) used the child as a husband substitute to fulfill emotional needs; (7) attempted to keep the child dependent; (8) discouraged the development of heterosexual interests in the child; and (9) was often overtly seductive with her son.

According to Coleman, research efforts which have specifically studied father-child interaction patterns have compiled results which permit the following generalizations. The fathers of schizophrenics have been found to be: (1) inadequate role models for their sons; (2) indifferent to their children's needs; (3) indifferent to the pathology of the mother; (4) passive; (5) rejecting; (6) domineering; (7) cruel; and (8) at times quite sadistic.

Studies made of the family as a group reported numerous examples of disordered interaction patterns such as: (1) confusion of generational and sexual boundaries among the family members; (2) contradictory communications between family members; and (3) the general group acceptance of an interpretation of "reality" which is quite deviant from what is generally considered to be a "normal" perception of social reality.

And, finally, studies of interaction patterns between the parents of a schizophrenic have reported that these relationships consist in: (1) open discord and hostility between the mates; (2) intense competition between the mates to "win over" the loyalties of the children; and (3) a situation of "pseudomutuality" where underlying conflict, hatred, and deviant interpersonal relationships are covered up by a facade of the "happy marriage."

Coleman concludes from his review that, as mentioned above, the contradictions in these findings as well as the diversity and breadth of the findings makes it difficult to construct a specific interactional theory which is parsimonious concerning the etiology of schizophrenia. This writer's analyses of 138 "purported" family interaction studies revealed that Coleman's generalizations concerning the findings of these studies and his conclusions concerning their implications for the construction of an etiological theory are indeed accurate.

(15) **All of the family interaction studies reviewed for this paper focused only on the interactional abnormalities which characterize the families of schizophrenics. No systematic analysis was**
conducted concerning the health-fostering interaction sequences characteristic of these same families. Such a one-sided approach ignores how health-fostering patterns might offset the negative effects of certain interactional abnormalities in these families. In short, the magnitude of interactional abnormality in relation to the magnitude of positive interaction patterns has not been investigated. This is a major weakness of these studies (Dailey, 1952; and Sperber, 1962 both concur with this critique).

(16) Those family interaction researchers who do not study control groups of normals are often quick to label social behavior of families of schizophrenics as "abnormal," "deviant," or "pathological" without having any reliable information or criteria as to what is "normal" social behavior for "normal" families. This writer was surprised to find in this literature investigation that there have been very few studies conducted which have attempted to study the interactional patterns of normal families. Studies such as Ackerman's and Behrens' (1956) which studied normal families in depth are few in number. Without such studies, the claims of family interaction researchers concerning the abnormality of certain interactional processes may be questioned as to their validity.

(17) Family interaction studies have historically used many different methodological designs, methodological techniques, and samples. Such wide variability concerning these factors has made it very difficult to compare the findings of one study with the findings of other studies. Often the very nature of the data collected
is dissimilar. Simply, approximately 85 percent of the family interaction studies which have been reviewed here have not been replications of previous studies. Comparability of findings, therefore, is a serious problem associated with any effort designed to review the etiological "evidence" provided by family interaction studies.

One illustrative example of this variability of methodologies was the use of the Shoben Attitude Scale (Shoben, 1949) by family interaction researchers. Although the Shoben Attitude Scale was used several times, different versions were administered each time making even these results difficult to compare across studies.

(18) Ninety-five percent of the studies reviewed for this thesis failed to address the important question: "Why does one sibling in a 'pathological' family setting manifest schizophrenic symptoms while other siblings do not?" It is important that family interaction researchers attempt to answer this question if they hope to develop a convincing etiological theory regarding the incidence of schizophrenia. Unfortunately, however, this question is rarely pursued by family interaction researchers. Only two studies were found which actually attempted to answer this question empirically: Lidz, et al. (1963a), and Wing (1964).
CHAPTER IV
A SUMMARY AND CRITIQUE OF FAMILY INTERACTION STUDIES: 1934-1963

This chapter provides a concise summary and critique of the methods and findings of the major family interaction studies which have been published in English through 1963. Only five studies which have been mentioned in the literature have not been reviewed here because they were published in a foreign language. Studies published from 1964 through 1969 were also reviewed by this writer. The review of these studies revealed that they manifested, with only a slight decrease, the same inadequacies as the studies published from 1934 through 1963. The more recent studies, however, have not been individually summarized and critiqued in this section.

It must be noted that a "publication bias" may have had an effect on the universe of studies which were available for the scrutiny of this researcher. This publication bias refers to the possibility that only the "significant" or "successful" (i.e., studies supportive of the hypothesis that "disordered" family interaction patterns are associated with the onset of schizophrenia) studies may get published while the studies with negative or inconclusive findings may be rejected for publication. Meltzoff and Kornreich (1970) report:
We will never know how many studies were never submitted for publication because their results were contrary to those anticipated or how many, after submission, were rejected because of editorial bias. We do not mean to suggest that editors of scientific journals intentionally censor views opposed to their own. However, it is a plausible hypothesis that editorial consultants read far more critically when an article is not in accord with their beliefs about a subject and are more likely to find technical flaws in the study and recommend its rejection. (p. 32)

This possible bias should not be overlooked by the reader.

What follows, then, is a general review of the methods and findings of those family interaction studies published through 1963. Only the major methodological procedures, weaknesses, and findings of these studies will be reported. This thesis has been designed so that a careful reading of this chapter will support the general evaluation of the adequacy of these studies which has been offered in Chapter II and Chapter III. And, very simply, this researcher hopes that this chapter will serve as a kind of encyclopedia concerning family interaction studies of this type. This writer has been impressed with the fact that too often textbooks and literature reviewers mention studies and their major "findings" without offering substantive theoretical and methodological information concerning these studies. This paper is designed to provide the interested scholar with an accurate and relatively brief description of the substantive methods, findings, and weaknesses of these studies. The following review is one of the most comprehensive reviews of these studies ever attempted. Hopefully such a review will act as a valuable reference guide for researchers in this area.
An intensive review of the literature in this area revealed that the first attempt to "empirically" analyze family interaction patterns as possible etiological factors in the incidence of schizophrenia was conducted by Kasanin, Knight, and Sage (1934). These researchers analyzed 45 case histories of the families of schizophrenic adults. The researchers required that these be "good histories of early childhood" and parent-child relations (p. 251). That is to say, only complete and detailed records were selected for study. Such a requirement is an obvious selective factor which was readily admitted by the researchers. The findings of the study may be, therefore, at least partially a consequence of the operation of this selective criterion.

Using absolutely no control groups, the analyses of these records revealed that in 60 percent of the cases the mother of the schizophrenic displayed an overprotective or rejecting attitude towards the child during his childhood. The data were not systematically presented. This percentage was simply reported and several case studies were cited as examples. The data analyses did not attempt to break down the information according to important demographic and sociological variables.

Although 60 percent of the mothers were reported to have been overprotective and rejecting, a closer reading of the study revealed that there were actually only two cases of parental rejection discovered. And, the source of the data which were included in the case history was the report of the patient himself in only these two cases. The other 43 case histories included data mostly derived from
information offered over the years from the parents. Perhaps, then, these findings are at least partially a consequence of the informants used to complete the case histories.

The results were also quite inconclusive because the researchers reported that the pre-schizophrenic child seemed to be biologically "inferior". This inferiority, report the researchers, "...is easily detected by the parents and serves as one of the principle causes of overprotection. One must remember that the pre-schizophrenic child invites and solicits the extra care and attention on the part of his parents" (p. 263). Therefore, it is possible that the major "finding" of overprotective maternal behavior may be a consequence, rather than a cause, of abnormal behavior by the child.

Helen L. Witmer, et al. (1934), a professor and student team from the Smith College for Social Work, conducted a major study which has been often overlooked in literature reviews.

These researchers collected data concerning the childhoods of 40 adult manic-depressive and 68 "dementia praecox" patients. No "normal" control group was designated nor were the two study groups matched on any major demographic and sociological variables.

Using an unstandardized interviewing schedule (a weakness readily admitted by Witmer, et al., p. 306), these eight researchers interviewed an average of four informants per subject. Each informant was interviewed one time for the duration of one to three hours.

The research design required that only "presumably intelligent" (p. 356) and "cooperative" (p. 293) informants who had known the patients "the greater part of their lives" (p. 356) be interviewed.
Here, again, selective factors were operating and may have biased the sample obtained.

Another problem, readily admitted by the researchers (p. 356), was that these subjects were distributed over five different hospitals in the Boston area. Therefore, the serious problem of diagnostic variability was quite evident in this study.

After questioning the informants concerning the patient's personality traits during his childhood and adolescence and the intra-family relationships in the home of the patient when he was growing up, the researchers reported that two-thirds of the patients in each group were found to be "...unusually sensitive and close-mouthed both as children and as adolescents" (p. 357). The intra-familial findings, which are of primary interest here, revealed that in most homes of both groups severe parental overprotection was common. This pattern was reported to be especially prevalent in the manic-depressive group. This latter finding is contradictory to many studies which report that overprotectiveness is a specific trait characteristic of the mothers of only schizophrenics.

Witmer, et al., must be credited with making considerable efforts to determine if the data offered by the four informants for each case were generally consistent. It was reported that responses across informants were quite comparable.

Note here that the data was not analyzed nor presented in such a way that the possible influence of the sex of the patient, his religion, nor his ethnic status could be considered. In fact, no description of the major demographic and sociological characteristics
of the study group was provided.

In 1938, J. Louise Despert released a study of the parents of childhood schizophrenics. This study is often mentioned in reviews of the literature concerning family interaction studies. Yet, it is rarely considered problematic that Despert was studying parents of childhood schizophrenics while most other family interaction studies analyze the childhood histories of those who develop late adolescent or adult schizophrenics. The findings of Despert's study are usually just thrown in a pot with the findings of other studies with no concern for the real differences in who and what were being studied. The questionable validity of assuming that childhood and late adolescent and adult schizophrenia are the same disorder has been discussed in detail in Chapter II. Since this researcher is concerned only with studies of late adolescent and adult schizophrenics, Despert's study is disqualified from consideration in this paper.

Pollock, Malzberg, and Fuller (1939) studied the childhoods of 155 first admission manic-depressive psychotics and 175 first admission cases of "dementia praecox" by analyzing case records and conducting interviews with parents of the patients and other relatives. Little information was given concerning the interview format or the type of case records analyzed. No control groups were designated, nor were the demographic and sociological characteristics of these groups described.

The study, which appears in book form, presents in great detail the results of the investigation. Most of the significant
aspects of the patients' life from birth to onset of the disorder was analyzed and reported. Although much of the data analysis was qualitative, these researchers must indeed be commended for asking many of the "sociologically" right questions. Not only was the relationship between the child and his parents analyzed, but numerous questions concerning the subject's social life nearer the time of the onset of the disorder were investigated. For example, Pollock, Malzberg, and Fuller analyzed the nature of the subject's employment at the time of admission. The marital and sexual relationships of the subject immediately prior to hospitalization were also studied and described. Although no significant differences were found in the social histories of these manic-depressive and psychotic patients, the findings obtained have unknown significance because no control groups were established. At least, however, these researchers were aware of the possibility that one's later social situation may be just as etiologically important as one's childhood socialization experiences.

The major finding of this study was that the families of these psychotics kept the patients socially isolated from non-family groups and individuals.

Hadju-Gimes (1940) conducted psychoanalytic sessions with four schizophrenic women patients. These subjects were asked to describe their relationships with their parents during the patients' childhood. No information was offered concerning the demographic and sociological characteristics of these women and their mothers. No control groups were designated.
This study, which was the first study designed to use the patient as the data source, reported that all these patients were found to have had a "...cold, rigorous, sadistically aggressive mother and a soft, indifferent, passive father" (from Reichard and Tillman, 1950:250).

Hadju-Gimes reported that these patient descriptions indeed seemed accurate in that they were congruent with Hadju-Gimes' own impressions of these mothers which were gained through various professional conferences with the mothers.

Note here the small sample, lack of a control group, lack of information concerning the sample, and lack of systematic presentation and analysis of the data. These are serious weaknesses.

In 1940, Pollock, Malzberg, and Fuller published a partial report of their study which was already published in whole the year before (see Pollock, Malzberg, and Fuller, 1939). This 1940 report was in journal form and gave no new information concerning the study. It seems as if this article was published simply in order to increase the authors' personal list of articles published.

Another frequently cited "empirical study" does not hold up to that description when it is closely analyzed. This "study" was authored by Norman Cameron (1943). Giving absolutely no empirical support for his factually stated comments, Cameron says that paranoid-schizophrenics develop this syndrome due to the behavior of those closest to him in "early life." These close individuals (Cameron never says specifically the parents) do not adequately socialize the
child with linguistic techniques and role playing abilities. In essence, the individual grows up lacking the social skills necessary for daily interaction. Therefore, says Cameron, the individual feels insecure socially and begins to develop a fear of a "paranoid pseudo-community." The fear of this community makes the individual become even more withdrawn and socially incapacitated. His fears become truly realized as individuals do begin to react negatively to the behavior of this individual.

Note here that Cameron does not even say whether or not this report is the product of a study or theory. He just writes as if he is describing a fact. And finally, no details are given concerning how these "close" individuals socialize or fail to socialize the child with these social techniques. It indeed seems strange that this article is often listed as a "study" in literature reviews.

David Levy published a now widely read work entitled *Maternal Overprotection* (1943). Levy began his study by accepting as valid (according to "clinical study and common observation," p. 15) the hypothesis that maternal attitudes of overprotectiveness are causally related to the incidence of schizophrenia. Levy then selected for study 20 clearly evident cases of overprotective mother-child patterns. He wanted to study the details of this kind of relationship as well as use these cases as illustrations of how maternal overprotectiveness may be etiologically associated with the incidence of schizophrenia. Psychotherapy sessions with the mother and child were conducted to secure data.
No control groups were designated nor were the details of his clinical studies and observations presented. The demographic and sociological characteristics of these subjects were not presented. In short, it seems curious that this work is often cited as a "study" attempting to determine the general etiology of schizophrenia.

In 1945, Friedlander studied case histories collected during the childhoods of 27 individuals of whom 16 later were diagnosed as cases of "dementia praecox," nine as "psychopathic personalities," and two as cases of "manic-depressive psychoses." Using check-lists and scaling systems, Friedlander analyzed these case histories and found that the childhood homes of all three of these patient types were generally characterized by extremes in discipline; rejecting, oversolicitous or overprotective parents; severe friction and anxiety among family members; and general family social isolation. No specific differences were noted for the schizophrenic group.

Friedlander did not designate any control groups for study nor were the demographic and sociological characteristics of the sample presented. And, as mentioned above, the findings were not specific for any one psychological syndrome.

Escalona (1948) systematically surveyed the case histories of seventeen "psychotic children." Due to his consideration of child subjects as well as his non-specific diagnostic term ("psychotics") this study is disqualified from consideration in this paper. Note, however, that this study is often listed as an important family interaction study concerning the etiology of the incidence of schizophrenia.
Its findings are compared to the findings of studies which are more specifically concerned with late-adolescent or adult schizophrenia as contrasted to simple childhood psychosis.

Frieda Fromm-Reichmann is generally credited with coining the term "schizophrenogenic mother" (1948). Based on her experience with psychoanalytic psychotherapy with disturbed schizophrenics, Fromm-Reichmann reached this conclusion:

The schizophrenic is painfully distrustful and resentful of other people, due to the severe early warp and rejection he encountered in important people of his infancy and childhood, as a rule, mainly in a "schizophrenogenic mother." (p. 265)

No control or specific study groups were designated nor were the details of the researcher's "experiences" in the clinical setting presented. The simple number of patients with whom she had contact over the years and the predominant demographic and sociological characteristics of these subjects were also not discussed.

Ellison and Hamilton (1949) analyzed "family histories" of 100 males all diagnosed as cases of "dementia praecox." No information was given concerning the methods used to collect the data contained in the "family history" nor were the techniques of data analysis discussed. Also, no control groups were designated.

These subjects reportedly ranged in age from fifteen to fifty years and most had a generally high level of educational attainment. Although it may be permissible to use an educationally homogeneous sample, the wide range of the age of the subjects must be considered problematic here. Other demographic and sociological characteristics
of the study group were not mentioned.

These researchers reported that the parents of these dementia praecox patients were characterized as follows: 80 percent of the fathers were poor role models for the son; 33 percent of the fathers were domineering individuals; "several" of the fathers were sadistic and 33 percent of the fathers were passive and indifferent. Sixty percent of the mothers were reported to be overprotective and oversolicitous towards their sons. Note that the finding that 33 percent of the fathers were domineering individuals is contrary to most studies which characterize most fathers of schizophrenics as very passive and withdrawn individuals.

In 1949, Lidz and Lidz reported concerning "The Family Environment of Schizophrenic Patients." These researchers surveyed 50 case histories of the parent-child relationships which characterized the homes of children who were later diagnosed as schizophrenic. These case histories were, according to Lidz and Lidz, very detailed. However, little information was given as to how these histories were analyzed. No control groups were designated nor were the demographic and sociological characteristics of the subjects and their families presented.

Lidz and Lidz concluded that "...only five of the fifty schizophrenic patients could be said to have clearly come from reasonably stable homes in which they had been raised by two stable and compatible parents according to fairly well accepted principles of child rearing" (p. 49). In the other 45 cases, the mother and father seemed to have an equally negative influence on the healthy mental development
of the child. Unfortunately, detailed breakdowns and descriptions of the reported pathological influences of the parents were not provided by these researchers.

Lidz and Lidz strove for objectivity when they admitted that their study findings "...can be taken to indicate that the instability of schizophrenic patients is hereditary" (p. 51). Here it was admitted that these negative parent-child relationships may actually be due to disturbed behavior in the parents which is genetically transferred to the offspring. Lidz and Lidz concluded that the question of environment versus heredity is still an open one. However, they do feel that an emphasis on the environmental perspective is a valuable research effort in that most etiological researchers prior to 1949 used a medical-model perspective.

Tietze (1949) conducted a study which has often been widely acclaimed as one of the first studies truly designed to systematically analyze family interaction patterns. For example, Reichard and Tillman (1950) called the Tietze study the "...most thoroughgoing research effort into the nature of parent-child relationships..." published to that date (p. 248). A close analysis of the study, however, reveals some very serious inadequacies according to contemporary scientific standards.

Tietze chose to study 25 "intelligent" and "articulate" (p. 55) mothers of schizophrenics by the use of interviewing schedules. (Note here the presence of selective factors -- "intelligent" and "articulate".) The age of the patients ranged from 16 to 36 years while the ages of the mothers ranged from 39 to 64 years. Tietze did
not designate a control group, and she readily admitted that her sample differed according to cultural, educational, religious, and socio-economic backgrounds. The heterogeneity of this sample was not considered in the data analysis and data presentation.

The mothers of these schizophrenics were interviewed from three to sixteen times with each session lasting from fifty to sixty minutes. These sessions revealed that all the mothers were over-anxious, obsessive, domineering, and restrictive with the natural sexual instincts of the child. Most mothers, reported Tietze, were also oversolicitous and had great needs for approval. Being more specific, Tietze said that: "It is the subtly dominating mother who appears to be particularly dangerous to the child. Her methods of control are subtle and therefore do not provoke open rebellion as undisguised domination may" (p. 65). The child, in this case, has no overt outlet for his feelings of frustration and aggression.

Tietze must be credited with recognizing the problems inherent in an ex post facto study. She says:

Information concerning the chronology of the children's development must be taken with a grain of salt because of the passage of time. Most mothers had more than one child, often in close succession, and it is quite understandable that they tended to confuse dates and ages. The attitudes in regard to early mother-child relationships had also undergone a change; what at the time may have been an issue of great importance, charged with emotions, no longer was important, overshadowed by the impact of the mental illness. Mothers as a whole found it difficult to delve into the past as memories were evoked touching on their own problems and conflicts, stirring up anxiety. (p. 56)

The above problem, plus the lack of a control group and Tietze's failure to break the data down according to the major demographic and sociological variables which characterized the informants makes this
Gerard and Siegel (1950) studied the history of the social relationships between schizophrenic patients and those with whom the patient had had "prolonged and intimate contact" (usually the parents of the patient) (p. 50). Seventy-one schizophrenic patients and accompanying informants were selected for study. Gerard and Siegel admitted that 20 to 25 percent of the patients originally selected in a random manner could not be included in the sample because no appropriate informants were available for questioning. This, of course, makes the sample somewhat biased in an unknown direction.

Each informant was interviewed according to a standardized questionnaire format one time for an average period of one and one-half hours. Usually two informants per schizophrenic were interviewed. It is questionable if accurate and extensive quantities of data could be obtained in such limited interview sessions.

A control group of 30 "...male students in the senior year and graduating class of an academic high school was utilized as the best practically-available control population" (p. 55). Generally, the control group and the study group were fairly well matched (according to group frequency matching procedures) on the following variables: age, ethnic status, and family economic status.

The major findings of the study were that the patients' parents related to each other in a cold, passive, and pseudo-harmonious manner; and most of the mothers of schizophrenics were overprotective.
towards the patient and domineering in her relationships with all family members.

Although this study represents an improvement in design over former research efforts in that a fairly well matched control group was designated, it suffers from the non-representativeness of its sample. That is to say, since 70 percent of the subjects and controls were of Jewish or Italian descent, it becomes problematic to compare the findings of this study with the findings of most other studies whose subjects are predominately white Anglo-Saxon Protestant.

McKeown (1950) studied the case histories of schizophrenic, behavior-problem and normal subjects. He focused on the reported familial behavior of the parents of these subjects during the subjects' childhoods. These groups were fairly well matched according to sex, age, ethnicity, and socio-economic status. A selective factor was operating, however, in that "good informants" had to be available for each case (p. 176).

The reported findings were as follows:

Statistically significant differences appear among the parents of selected groups of schizophrenics, behavior problems, and normals. Among the schizophrenics, the parents of the same sex show heavy incidence of demanding antagonistic behavior. Among the behavior problems, both parents show a similar heavy incidence of the same type of behavior. Among the parents of the normals, encouraging behavior predominates. Encouraging behavior is rare among parents of the schizophrenics and the behavior problems, and demanding-antagonistic behavior is rare among the normals." (p. 175)

Note here the similarity of the findings for the schizophrenic and behavior problem groups. Such non-specificity of findings does
little to move researchers closer to the discovery of a specific
factor or factors which may be etiologically associated with the inci-
dence of the specific disorder -- schizophrenia.

Prout and White (1950) interviewed the mothers of 25 schizo-
phrenic and 25 "normal" adults. They matched these groups (according
to group frequency matching procedures) fairly well according to
major sociological variables such as: age of the subject, ethnic
status, history of "broken homes," sex of the subject, and socio-
economic status of the subject's family. Unfortunately, the specifics
of these matching procedures were sometimes not reported. For exam-
ples, Prout and White simply report that: "The two groups were also
comparable as to socio-economic status" (p. 251). No data were offered
to document this important statement.

The findings of this study were that the mothers of schizo-
phrenics, when compared to mothers of normals, showed "...less drive,
less empathy, and less emotional stability" (p. 254). Prout and
White also reported that the mothers of schizophrenics "...stated
fewer goals for themselves...," and displayed "...fewer instances of
self-realization" (p. 255). They concluded that "...we believe that
this lack of being a person in their own right, no matter how they may
define it, may have pushed them to live out their emptiness in their
sons' lives, as far as their sons permitted it" (p. 255).

With the above findings in mind, Prout and White conclude by
pointing out that their findings do not support the findings of other
"superficial" studies which characterize the mothers of schizophrenics
as "overprotective and oversolicitous" (p. 255).
And finally, it is important to note that Prout and White admit that the control group might have been biased due to the operation of the selective factor of "willingness to volunteer and cooperate" as a control. They say that "...the type of women who is prone to cooperate with such a study by acting as a control is more inclined to civic interests and endeavors than a true sample of the total population would reveal" (p. 254).

Reichard and Tillman (1950) conducted a "study" in that they reportedly reviewed the social histories of 66 separate cases of schizophrenia which were published in professional mental health journals. These writers also reported that they studied the social histories of thirteen of their own schizophrenic patients. They concluded from this review that in 76 percent of the cases, the mother was found to be the dominant parent. In 13 percent of the cases these mothers were found to be "overtly" rejecting and in 63 percent of the cases the mothers of the schizophrenics were found to be "covertly rejecting." And finally, in 15 percent of the cases, the fathers were found to be "domineering, sadistic, and rejecting" (p. 257).

Reichard and Tillman, it should be noted, did not designate any control groups. They also failed to give the references for 44 of the 66 reviewed studies! Very little information was given concerning the patient sample. For example, no information was offered concerning the number of male and female subjects, the ethnicity and age of the subjects, or the diagnostic subtypes of the various schizophrenic patients. In addition, these researchers did not discuss the
possible operation of selective factors which may have influenced the decision to publish or withhold from publishing a particular case study. For example, perhaps case studies which show no pathology in the relationships between the patient and his significant others are not widely published simply because they provide little evidence which might support the family interaction etiological thesis.

Reichard and Tillman also failed to discuss the possible weaknesses of their primary data sources -- case studies. These cases were based on data obtained from the patient himself during the patients' psychotherapeutic sessions. Specifics concerning how the psychotherapist questioned or encouraged the patient are not offered.

Elanor Slimp (1950) analyzed and compared the case histories of ten schizophrenic, five "pre-schizophrenic," and fifteen "problem" children. Being that the subjects were children, this study is disqualified from analysis in this paper.

Clardy (1951) used "general observations," clinical experience, and case histories (p. 85) to study the development and course of schizophrenia in child subjects. The child's family experiences were of primary interest to Clardy. Again, the use of child subjects disqualifies this study from analysis in this investigation.

In 1952, Lidz and Lidz published an article entitled "Therapeutic Considerations Arising from the Intense Symbiotic Needs of Schizophrenic Patients." Following the publication of this article, these researchers, in conjunction with Fleck, Cornelison and other
researchers, began to study intensively a group of schizophrenic adult patients as to their present and past familial relationships. The article was a simple description of the family interaction hypothesis concerning the etiology of schizophrenia. Special consideration was given to the phenomena of symbiotic mother-child relationships. The stage was set and the need stated for the execution of more intensive and comprehensive interaction studies.

These researchers proceeded to execute such a study of schizophrenic subjects during the period from 1952 to 1965. During these years, 25 articles\(^1\) appeared in various journals. Each article reported concerning a different aspect of the findings of this ongoing study. Finally, in 1965, an anthology and general summary of these studies was published in book form by Lidz, Fleck, and Cornelison. A general description and critique of this research project is presented below.

Between 1952 and 1965 a staff of researchers from the Department of Psychiatry at the Yale University School of Medicine intensively studied the families of seventeen schizophrenic patients who were admitted to the Yale Psychiatric Institution. Nine of the patients were male, while eight were female. Fourteen of the families were from the upper-class or upper-middle-class (based on father's income) while three of the families were from the lower-middle-class.

All of these families were intact -- no parent was absent from the home. The ethnic and religious orientations of these families were not mentioned by the researchers.

No control groups, per se, were designated for study. These researchers did point out, however, that in most cases the normal siblings of these schizophrenic patients were also studied. In a sense, these few siblings acted as a control group.

Three basic data gathering techniques were used. The primary source of data was repeated interviews with the parents of these schizophrenic subjects. These interviews were conducted by social workers and psychiatrists. Another source of data was interviews conducted with friends and other relatives of these families. These interviews were designed to obtain information concerning the social history of the relationships between the schizophrenic offspring and the other members of the family. And, thirdly, various batteries of psychological tests (mostly the "projective" types) were administered to these subjects.

These researchers concluded from this study that not one family was "well-integrated." That is, social relationships among family members were found to be quite hostile -- at either an overt or covert level.

Most of the parental marriages were described as seriously disturbed. According to these researchers, two basic types of disturbed marriages could be identified. The first type, termed "marital schism," seemed to characterize the majority of these marriages. Marital schism refers to a situation where there is open conflict and
division between the parents. And, these individuals constantly attempt to verbally destroy the worth of the other. The second type of marital pattern observed was termed "marital skew." Here the mother was reported to be the dominant marital partner who displayed very pathological behavioral and attitudinal traits. The husband was found to be passive and unable or unwilling to attempt to control the abnormal behavior of the mother. In this situation there is much unspoken hostility between the marital partners. The hostility seems to be "covert."

These researchers also reported that most of the members of these families displayed "paralogical thinking." That is, many of these subjects suffered from unrealistic and irrational thought patterns.

And finally, the other major finding of this investigation was that the parents of these schizophrenic subjects had not provided the developing child with adequate adult role models so that the child could develop a coherent self-identity.

The major strength of this study was its intensiveness. That is, the data gathering procedures were conducted several times a month for several years with each family. The quality and quantity of data collected by these researchers is quite impressive.

Abrahams and Varon's study (1953) is often mentioned in the literature as an important or "major" study. These researchers conducted group therapy sessions with schizophrenic women and their mothers for one hour, once a week, for two years. The number of subjects studied was not reported, nor was a control group designated.
The exact data collecting procedures were also not described. The only information offered was a report that the group sessions were conducted so that the participants could reconstruct the history of their interactions over the years.

From these procedures, Abrahams and Varon concluded that the relationships between the schizophrenic subjects and their mothers could be characterized as a situation of "maternal dependency." These researchers admitted that such behavior may have been a reaction to the child's disorder instead of a cause of the disorder.

This "maternal dependency" refers to the mother's apparent need to feel superior. Therefore, she continually belittles, degrades, and verbally attacks her daughter in an effort to prove her own superiority. Once the daughter is placed in such an inferior position, the mother depends on the perpetuation of this situation so that the mother's ego can be constantly reinforced.

Helen Elizabeth Frazee (1953) studied the case records of 23 schizophrenic and 23 normal control males. These case studies, which were compiled during the childhoods of these subjects and before the subjects were diagnosed as schizophrenic, were reported to be fairly complete. Frazee is to be commended for the comparability of the sample and the control group (group frequency method of comparison was used). These groups were well matched on the following variables: father's occupation, general family economic status, sex, age, and mean intelligent quotient of the subjects. No information was offered concerning other major demographic and sociological characteristics of the groups.
Frazee's method of analysis of the case records was not described. Frazee simply reported that the schizophrenic group was found to have significantly more dominant and overprotective mothers, and significantly more overtly rejecting and severely cruel fathers. Overt marital conflict was also more characteristic of the parents of the schizophrenic subjects. Note here that the findings reported for the fathers of the schizophrenics are in contrast to the findings of the majority of family interaction studies which depict the father as passive, ineffectual, and withdrawn.

Mark (1953) compared the attitudes of 100 mothers of male schizophrenics and 100 mothers of male "normals" concerning child-rearing practices. These two groups were very well matched according to age of the schizophrenic son, age of the mothers at the time of the study, religion, education, socioeconomic status (based on the husband's occupation) and the number of offspring in the family.

Using a self-administered written questionnaire composed of 139 items, Mark reported that 67 items significantly (at .05 or better level of confidence using the chi-square method) differentiated these two groups. The data analysis revealed that the mothers of schizophrenics were basically restrictive in their control of the child and displayed both excessive devotion and cool detachment towards the child.

Plank (1953) studied 75 schizophrenic males who were hospitalized in a Veterans Administration Hospital. Plank designated no control groups nor did he discuss the demographic and sociological
characteristics of his study group. Plank concluded that the mothers of the schizophrenics were overprotective and dominant while the fathers were passive, ineffectual, and weak. These "findings" were based upon "...my own incidental observations in interviews with patients and collaterals" (p. 817). These interviews, admitted Plank, were not "special interviews for the purpose of the study" (p. 817). These findings were also a result of Plank's analyses of "existing records" most of which were reported to be quite detailed and complete (p. 817). No information was offered concerning how these data gathering techniques were used to gather, analyze, and interpret the data.

Rosen (1953) published a work which concluded that: "A schizophrenic is always one who is reared by a woman who suffers from a perversion of the maternal instinct" (p. 97). Rosen described schizophrenia as "...a disease which has its inception somewhere between birth and prior to the termination of the pre-verbal period and is caused by the mother's inability to love her child" (p. 99). Rosen, a psychoanalyst, reached these conclusions after many years of clinical observation. He does not attempt to convince his readers that his observations were carefully, systematically, or objectively executed. No specific study or control groups were mentioned. His conclusions were simply based on "clinical observations."

Gurevitz (1954) conducted group therapy meetings with the parents of schizophrenic children. Based on his impressions of over five years of this kind of therapy, Gurevitz concluded that the
hypothesis that the parents or a parent of a schizophrenic child is rejecting could not be confirmed. Gurevitz's study is disqualified from a detailed analysis here because the index subjects were schizophrenic children.

Nielsen (1954) investigated the childhoods of 55 adult schizophrenic women and 110 adult "normal" women. The control group of normal women consisted of two women for each subject. Each triad was well matched according to average age, marital status, residential history, and occupation. Ethnic, educational, religious, or general socioeconomic orientations were not discussed by Nielsen. And, Nielsen readily admitted that: "For practical reasons the background of the controls has not been examined so carefully as that of the patients" (p. 283). This is problematic in that a closer analysis may have revealed that these families and subjects selected for their "normalcy" may not have been so normal after all.

Data concerning the childhoods of the controls were gathered by interviewing half of the controls in one sitting and by mailing a questionnaire to the other half of the control group.

Data concerning the childhoods of the schizophrenic women were compiled "partly from" case history analyses; interviews with patients, friends, and relatives; and by investigator impressions gained from visiting the homes of the patients. Note here that Nielsen did not consistently use one approach for gathering data concerning these subjects. And, he gives the reader no information concerning the characteristics of the interview or the analytical techniques used to scrutinize case histories. In fact, Nielsen does not even
inform his reader concerning which data gathering technique was the one technique predominantly used. Simply, very little information is provided on this question.

Nielsen's "minor" finding was as follows: "The patients had fewer friends, which to some degree can be put down to the parents keeping their children apart from others" (p. 287). But, concerning major differences, Nielsen concluded that: "It was found that in the childhood background of schizophrenic women there was no difference worth mentioning from that of healthy controls" (p. 289).

The above conclusion, of course, is non-supportive of family interaction theories concerning the incidence of schizophrenia and is generally contrary to the findings of most other studies of a similar theoretical and methodological design.

Wahl (1954) examined the very detailed case histories which were available concerning 392 schizophrenic adults (161 females and 231 males) who were consecutively admitted to the Elgin State Hospital (Massachusetts) from June to December, 1948. Because the case studies used had to be quite complete and detailed, Wahl discarded over one-third of the originally selected histories because of incompleteness, vagueness, or ambiguity of the data enclosed. This, of course, biased the sample in an unknown, but possibly significant, manner.

Wahl chose not to designate a control group for the following reasons:

Since our sample was extremely diverse in age, sex, and duration and severity of illness, it was not considered feasible to command a control group of comparable heterogeneity; hence, the extent to which certain of the variables,
such as parental rejection or overprotection occur in a "normal" population has not been determined. (p. 669)

Pointing out that this study is only of an "exploratory" nature, Wahl said that his study was attempting to "...assess the kinds, frequency, and intensity of stresses in the lives..." of schizophrenic patients (p. 668).

The study group itself was "...extremely diverse in age, sex, and duration and severity of illness..." according to Wahl (p. 669). He failed, however, to give the reader a breakdown of the distribution of his subjects according to these variables.

Another related problem characteristic of this study was Wahl's failure to give the reader any information whatsoever concerning other demographic and sociological characteristics of the study group. For example, information concerning the educational, ethnic, socioeconomic, and religious orientations of the study group was not provided.

Wahl used a standardized and systematic data gathering and data analysis technique. He created a formal check list composed of criteria widely accepted to be of importance in determining the presence or absence of parental rejection or overprotection.

Wahl's major findings were that 48 percent of these schizophrenics came from homes marked by severe parental rejection or overprotection by one or both parents. Wahl considered these findings to be strongly supportive of family interaction theories concerning the etiology of the incidence of schizophrenia. He concluded that such a disordered environment is probably a necessary, but not sufficient, condition for the manifestation of the schizophrenic syndrome.
Arieti (1955) wrote a work entitled Interpretation of Schizophrenia. Arieti said that: "This book is the result of ten years of study, observation, and thought on the subject..." of the etiology of schizophrenia (p. 13). Arieti's conclusions, then, are based on his own clinical observations as a psychiatrist. No other empirical evidence is offered. No control groups were designated, nor were the demographic, sociological, and psychological characteristics of Arieti's study group described.

Arieti reported that in families with a schizophrenic offspring one marital partner was usually severely dominant over the other marital partner. And, generally, Arieti found that the mother, and often both parents, smother the child with demands, accusations, and restrictions concerning his life style. Generally the child is permitted little independence. The child then experiences internalized conflict. That is, the child feels torn apart by his own wishes and the dictates of his parent or parents. This conflict results in severe anxiety and withdrawal ... leading to the manifestation of schizophrenic symptoms.

Freeman and Grayson (1955) administered the Shoben "Parent-Child Attitude Survey" (Shoben, 1949) to the mothers of 50 adult male schizophrenics and to the mothers of 50 adult "normal" males. The control group had a population whose age range (20 to 35 years) was the same as the age range of the schizophrenic subjects. Unfortunately, this was the only item upon which the subject and control groups were well matched. Because the control subjects were selected from college psychology courses, it is very probable that the control group had a
much higher level of educational and economic status than did the schizophrenic subjects. Information concerning the other major demographic and sociological variables characteristic of these groups was not presented.

Several other problems characterized this study. First, different researchers (college students) were used as questionnaire administrators for each questioning session. Therefore, problems concerning standardization of testing and scoring procedures and differential researcher influences upon the population must be considered. A second problem was with the instrument used to elicit maternal attitudes toward child-rearing. This questionnaire, known as the Shoben "Parent-Child Attitude Survey" (Shoben, 1949), was originally standardized by using a population of the mothers of "behavior problem" children. Therefore, the validity of using this instrument to evaluate the normalcy of the mothers of schizophrenics is questionable.

Freeman and Grayson readily admit two other possible problems. First, it must be realized that only professed attitudes are being detected. The relationship between professed attitudes and actual behavior is unknown. And, these researchers point out that there may be a difference between attitudes detected by the questionnaire and the attitudes which characterized the mother several years previous when the son was a young child. These problems, of course, characterize most of the studies reviewed in this paper.

Freeman and Grayson reported that their questionnaire analysis revealed that the mothers of schizophrenics were significantly more "possessive" and "ignoring" towards their children than were the
mothers of "normals." However, it was reported that the question-
naire failed to find significant differences between the two groups
of mothers in regards to a mother's degree of overt dominance over
the thoughts and behavior of her child. This latter finding gener-
ally conflicts with most other family interaction studies which con-
clude that many of the mothers of schizophrenics are abnormally domi-
neering in their relationships with their children.

Haley (1955) conducted a study "...based on an examination
of a small sample of families participating in therapeutic sessions
where parents and schizophrenic child, as well as siblings, are seen
together and recorded" (p. 357). Using this technique, Haley con-
cluded that "...the family of the schizophrenic is a special kind of
system which can be differentiated from other family systems" (p.
357). This family, reports Haley, is characterized by family mem-
bers who make statements which they proceed to incongruently qualify.
These families are also said to be lacking in overt affection between
the members. Generally, there is no leadership among the members --
things "just happen." No alliances form among members and the family
is generally inflexible in its relationships with other social groups.

According to Haley, these familial characteristics upset the
emotional balance of the child. The child's frustration builds until
he attempts to adjust or adapt to his disordered environment by mani-
festing schizophrenic behavior.

Unfortunately, Haley did not designate a control group for
study. Nor did he inform the reader of the demographic and sociologi-
cal characteristics of the study group. Also, his exact methods of
"examination" of these families was not discussed. Simply, the reader is given few details regarding the methodological techniques of the study.

Haley must be commended, however, for pointing out that these detected family patterns may be a reaction to, or consequence of, the incidence of schizophrenia within a family member. Haley also recognized the effects that the observer might have had on a subject's behavior. And, finally, Haley argues strongly for long-term (extensive and intensive) research projects so that accurate data can be compiled. The following quotation is illustrative of Haley's sensitivity to these problems:

... To study the system of interaction in the family of the schizophrenic it is necessary to bring family members together over a period of time and directly observe them relating to one another. Inevitably the fact of observing the family introduces a bias into the data for they may behave differently when observed than when not observed. It would seem to be impossible to leave the observer out of this sort of study, and the problem is to include him in the situation in such a way as to maximize the information he can gain. The most appropriate type of observation would seem to be in a therapeutic context. There is serious doubt as to whether this type of family can be brought together without therapeutic support. If the parents are merely asked to be observed interacting with their schizophrenic child, the question is automatically raised whether they have something to do with the illness of the child; accordingly guilts and defenses are aroused and must be dealt with in the situation. Long-term observation of the family is also necessary since they may give one impression in a single interview and quite another when they have talked together many times and pretenses are dropping. (p. 358)

Hill (1955) published a book entitled Psychotherapeutic Intervention in Schizophrenia. Hill reached several conclusions concerning the mothers of schizophrenics. These conclusions were based upon
Hill's 35 years of practice in psychotherapeutic sessions with schizophrenics and their families. His "findings" were also based on his impressions from "other sources." Unfortunately, Hill did not identify these sources.

Hill did not designate any control groups nor did he give any information whatsoever concerning the demographic and sociological characteristics of the study group. For example, Hill did not even designate the sexual characteristics of his study group.

Hill concluded that the mothers of schizophrenics were typically overpossessive to a severe degree towards their child. These mothers generally denied the child a clear sense of independence. And, although a mother's possessive actions are constant, her love is given conditionally. That is to say, if the child accommodates himself to the possessive behavior of the mother, the child is rewarded in that the mother offers constant expressions of love. But, if the child fights the mother's possessiveness, the mother may then withhold expressions of love.

Hill continued by reporting that the child therefore develops a poor sense of self-identity and self-esteem. This causes the child to take on a schizophrenic type of sick role which symbiotically complements the mother's desire to be completely possessive of her child.

It is important to note that this particular study is one of the most frequently mentioned studies in literature reviews in this area. Over and over again the "Hill study" is referred to ... often with an air of reverence for this "classical" work. An objective analysis of Hill's work makes one question the academic seriousness
of those who pass such judgments on this methodologically weak research effort.

Hotchkiss, et al. (1955) studied mother-adult schizophrenic son interaction patterns for possible clues concerning the etiology of schizophrenia. These researchers compiled "...observations and impressions of 22 mothers of young, male, single schizophrenic patients as they visited their sons in a mental hospital" (p. 452). The researcher "...chose a position as near to the visiting pair as possible but attempted to remain inconspicuous or preoccupied and made no explanation of her presence" (p. 453). This observer recorded on a standardized chart her evaluations concerning various characteristics of the mother-son interaction sequences.

Hotchkiss, et al., also utilized "...material from social work interviews with the mothers, impressions of them gained from nursing personnel and general information about their participation in the hospital activities open to them..." (p. 452).

These researchers did not designate a control group of any kind nor were the demographic and sociological characteristics of the subjects mentioned. The only such factor reported was the average age of the patient which was 23.7 years.

The major findings of this study were that eleven of the 22 mothers could be classified as "removed, non-participating" mothers (p. 455). And, contrary to the findings of other studies reviewed in this paper, only three of twenty-two mothers were described as "over-solicitous," "hovering," or "domineering" (p. 453). The finding that many of these mothers were removed and non-participating may be
questioned as to its etiological significance in that such a reaction may have simply been a normal response to the mothers' anxiety about having a staff member within hearing distance during the hospital visitation with the son. Therefore, she might have naturally reacted by becoming a "removed, non-participating" mother.

Bateson, et al., released an article in 1956 which is one of the most frequently referred to and well known family interaction "studies" published to date. Close examination of this article, however, reveals that the research procedures used were, at best, exploratory. These researchers clearly admit that this article is more a presentation of a theory (or hypothesis) than it is a carefully designed empirical study. In fact, the very title of the article is: "Toward a Theory of Schizophrenia."

Bateson, et al., introduced the concept of the "double-bind." This refers to a situation where an individual receives contradictory verbal and non-verbal messages from another individual. This communication process, when repeated over and over, may cause the message receiver to lose his facility for using words and concepts in a meaningful way. As the process continues, this confused individual may begin to adopt a whole new reality and language system which is out of context with the dominant cultural themes of his society. This individual may then be said to be "out of touch with reality" -- or schizophrenic.

This theory was developed as described below:

The theoretical possibility of double bind situations stimulated us to look for such communication sequences in the schizophrenic patient and in his family situation.
Toward this end we have studied the written and verbal reports of psychotherapists who have treated such patients intensively; we have studied tape recordings of psychotherapeutic interviews, both of our own patients and others; we have interviewed and taped parents of schizophrenics; we have had two mothers and one father participate in intensive psychotherapy; and we have interviewed and taped parents and patients seen conjointly.

On the basis of these data we have developed a hypothesis about the family situation which ultimately leads to an individual suffering from schizophrenia. This hypothesis has not been statistically tested; it selects and emphasizes a rather simple set of interactional phenomena and does not attempt to describe comprehensively the extraordinary complexity of a family relationship.

We hypothesize that the family situation of the schizophrenic has the following general characteristics:

1. A child whose mother becomes anxious and withdraws if the child responds to her as a loving mother. That is, the child's very existence has a special meaning to the mother which arouses her anxiety and hostility when she is in danger of intimate contact with the child.

2. A mother to whom feelings of anxiety and hostility toward the child are not acceptable, and whose way of denying them is to express overt loving behavior to persuade the child to respond to her as a loving mother and to withdraw from him if he does not. "Loving behavior" does not necessarily imply "affection"; it can, for example, be set in a framework of doing the proper thing, instilling "goodness," and the like.

3. The absence of anyone in the family, such as a strong and insightful father, who can intervene in the relationship between the mother and child and support the child in the face of the contradictions involved. (p. 217)

Note here that no information other than that quoted above was offered concerning the demographic and sociological characteristics of the sample. No control groups were designated nor were the exact procedures of data analysis described. For example, Bateson, et al., don't describe the criteria used to judge the presence or absence of a double-bind situation when the researchers were studying the tape recordings of the psychotherapeutic interviews.
In conclusion, although the Bateson, et al., theory is an important and interesting one, the empirical support for the theory still needs to be demonstrated.

Beckett, et al. (1956) gathered information concerning 27 schizophrenic patients by means of "collaborative psychotherapy" (i.e., concomitant treatment of patients and their parents). Unfortunately, their sample consisted of patients who ranged in age from four to thirty-three years. Here, then, within the design of one study, findings for childhood, adolescent, and adult schizophrenics were lumped together. As explained previously in this paper, such studies do not qualify for scrutiny in this analysis.

Galvin (1956) interviewed eight mothers and their schizophrenic offspring. Galvin presented no information concerning any of the demographic or sociological characteristics of the study group nor were the details of the interviewing process described. No control groups were designated.

With the results of these interviews and from clinical experience, Galvin concluded that most of these mothers used methods of secretly controlling their child by making constant appeals to the child's sense of pity, guilt, or shame. Galvin reported:

The premise is very early established between mother and child that the mother has suffered greatly for the child; the child is very deeply indebted to the mother. The child has the duty of paying the debt with gratitude and obedience. (p. 570)

The significance of this finding for theories concerning the etiology of schizophrenia was not discussed. This problem, plus the
small sample and lack of information concerning the sample and data
gathering and analyses techniques, makes the validity and signifi-
cance of this study quite questionable.

Kohn and Clausen (1956) interviewed 45 hospitalized and for-
merly hospitalized schizophrenics from a single community (Hagerstown,
Maryland). They conducted this study between 1940 and 1952.

A control group was constructed for this study. Each member
of the control group was individually matched with a member of the
study group on the following variables: age, sex, and social class
calculated according to the father's occupation. These groups, col-
collectively, were also matched according to the number of individuals
in the family and ecological area of residence. Generally, then,
the study and control groups were well matched on several variables.
However, the ethnic and educational characteristics of the groups
were not discussed.

Kohn and Clausen interviewed the subjects and questioned each
one concerning the authority or affectional behavior which his parents
directed towards him when he was thirteen and fourteen years of age.
This analysis revealed that, generally, the mothers of schizophrenics
were more domineering and acted as the parental authority figure in
far more cases than did the mothers of normal individuals.

This study had several strengths which should be discussed.
For example, in thirty-six of the cases very complete and detailed
hospital records were consulted to see if the patients' accounts of
their childhood were accurate. Note here that these hospital records
were, to a large extent, based on interviews with the siblings and
parents of the patients. Therefore, Kohn and Clausen have shown that the patients' testimonies are accurate in that they do not differ significantly from the content of the interviews with other family members included in the hospital records. Kohn and Clausen concluded:

These considerations all attest to a general consistency between the way that schizophrenics perceive their relations with their parents and the way that other family members perceive these relationships. The schizophrenics' reports cannot be dismissed as merely the products of memory distortions and projections attributable to the severely disorienting experience they have undergone. (p. 310)

Kohn and Clausen also admit that the parental behavior reported by the patient could have been a consequence, rather than a cause, of the patient's disorder. But, these researchers concluded that this hypothesis is probably not valid in that:

... Data from hospital case records indicate that in less than one-third of the cases were the schizophrenics in our sample perceived as different from their sibs until shortly before actual hospitalization. (p. 312)

Another strength of this study was that Kohn and Clausen attempted to determine the possible influence of selective factors upon the findings recorded. Kohn and Clausen admit that 17 of the 62 originally selected patients were not included in the study because they were either too ill or had moved from the Hagerstown area. Kohn and Clausen were able to interview relatives of 12 of these 17 patients in an effort to be sure that these non-participants did not differ significantly in life-history characteristics from those who did participate in the study. These researchers report that no substantial differences were found.
A final strength of the study is that Kohn and Clausen readily admit that their findings are similar to the findings obtained by other studies conducted concerning delinquents, ulcer victims, and drug addicts. Therefore, the hypothesis that maternal dominance in a mother's marital relationship and in her behavior towards her child is an etiological factor specific for the incidence of only schizophrenia is indeed a questionable one. Clausen and Kohn discuss this possibility and conclude by suggesting that future studies include comparison groups of parents of drug addicts, delinquents, etc.

Limentani (1956) conducted intensive psychotherapy with six schizophrenic patients (five male, one female) and concluded that, based on the reports of these patients, they all had symbiotic attachments to the mother. These patients were found to have had "unconscious" wishes to return to the infantile state so that they could be dependent upon and attached to the mother. And these patients were reported to be very passive so that the mother could easily control them.

Note here that the details of the psychotherapy sessions were not described, control groups were not designated, nor were any of the demographic and sociological characteristics, other than sex, of the subjects described.

Prout and White (1956) compared the early life familial experiences of schizophrenics with those of their "healthy" siblings of the same sex. By using a study group member and a control group
member from the same family, several variables such as parental
hereditary factors and parental deprivation are nicely controlled.

These researchers conducted standardized interviews with the
mother of the schizophrenic, the schizophrenic himself, and the sib­
ling of the schizophrenic. There were 30 individuals in each of
these groups.

The families which contained the mother and the control and
study subject were generally heterogeneous in their sociological
characteristics. For example, the patients' sibling order position
varied widely from family to family; seventeen of these families were
Protestant while ten were Jewish and three Roman Catholic; five sub­
jects had superior intelligence, eleven had above average intelli­
gence, twelve had average intelligence, and two had a low level of
intelligence. Other important factors were that most of the families
were "above average" (p. 163) in economic status, 17 of thirty of
the marriages were reported to be "stable and harmonious at the time
of the interview" (p. 163) and most of the families were "above
average" (p. 163) in educational achievement. In summary, this
sample is quite heterogeneous on some characteristics while it is
homogeneous on others. Unfortunately the data is not analyzed in
such a way that the possible differential effects of these variables
can be determined.

The researchers concluded from their investigation that the
patients and their siblings were both exposed to the same stresses,
trauma, and parental deprivations during their childhoods. However,
it seems that the pre-schizophrenic child reacted differently to these
life experiences. That is, these children seemed to react to stresses by manifesting severe withdrawal, anxiety, dependence needs and general unhappiness. And, the authors state that they:

...did find a real difference in personality and its development, between the schizophrenic patient and his healthy sibling. The pre-schizophrenic child was described as more sensitive, less happy, and less social, than his healthy sibling who was, on the other hand, more sociable, more emotionally independent, and a happier child. (p. 168)

With these findings, Prout and White suggest that the apparent over-protectiveness of the mother towards the schizophrenic child reported by many family interaction studies (and generally apparent in this study) is simply the mother's natural reaction to her child's abnormal personality. Therefore, suggest Prout and White, there may be little validity in the hypothesis that maternal over-protectiveness is etiologically associated with the incidence of schizophrenia.

Wahl (1956) studied the families of 846 male schizophrenic patients who were United States Navy personnel and who were consecutively admitted and diagnosed schizophrenic at the United States Naval Hospital in Philadelphia, Pennsylvania, from January, 1953, to May, 1954. Eventually 276 of these cases were discarded from analysis because of their incompleteness and vagueness (note: this is a major selective factor which may have biased the findings). No control groups were designated.

Wahl found that 50.3 percent of the 568 families analyzed were characterized by "...severe rejections and/or overprotection by one or both parents" (p. 72). However, Wahl admits that: "Such factors as parental rejection and overprotection required a subjective
judgment" (p. 202). But he does assure the reader that cases judged as representing rejection and/or overprotection were of a very severe nature.

Wahl's study group was quite heterogeneous in regards to most major demographic and sociological variables. For example, there was no consistent birth-order position of the patients in these families. It was determined, however, that although the average American family had 2.2 children, the families of schizophrenics contained 4.4 children. This group was also reported to be mixed according to religion and the data analysis revealed no definite patterns according to this factor. Unfortunately, Wahl did not discuss the ethnic, age, or social class status of the sample.

One of Wahl's most interesting specific findings is that "... A rejecting father was the most frequently encountered pathological parental attitude" (p. 209). Such a finding is contrary to the findings of most family interaction studies which report that the mother is usually the most overtly pathological influence on the child.

Dworin and Wyant (1957) administered the California "F" Scale to seven hospitalized male schizophrenics and their mothers. They also conducted intensive group psychotherapy with 43 similar individuals. A control group composed of hospital volunteers was designated. Dworin and Wyant report that: "The volunteer controls were of the same approximate age, educational level, ethnic, socio-economic and geographic background as the mothers of the schizophrenic patients" (p. 333). These researchers do not, however, present the specific information necessary to document their statement.
Dworin and Wyant conclude that: "The mothers of the schizophrenic patients showed an extremely domineering, smothering, close relationship with the child" (p. 333). These mothers were found to constantly emphasize "obedience," "discipline," "gratitude," and "respect for parents." Gradually the child seemed to become symbiotically attached to the mother, leading to an eventual dependence-independence conflict situation for the child. The "F" Scale results showed these mothers to be quite "authoritarian" in nature. The control group did not, according to the researchers, manifest such authoritarian attitudes or any of the other "pathological" behavior and attitudes described above.

Unfortunately, little information is presented concerning the procedures used to extract data from the group psychotherapy sessions. Details concerning the administration and scoring of the Rorschach are also not presented.

Spiegel, another frequently cited researcher in literature reviews, conducted a study which was published in 1957. Spiegel studied a group of families of "emotionally disturbed children." Again, such a study is disqualified from analysis in this paper because the subjects were children.

Ackerman's (1958) article entitled "The Psychodynamics of Family Life" is another frequently cited "study" concerning family interaction and schizophrenia. This "study" consists of Ackerman describing his ideas concerning the relationship between a patient
and his family which he has "...developed gradually during 25 years of psychiatric practice" (p. vii). His thesis is that individual mental disorders may actually be a reflection of family disorders. To support this thesis by example, Ackerman reports specifically on his clinical experiences with 50 psychotic patients and their families.

Note here that the psychological characteristics of this study group are not reported. That is, one is not told the diagnostic type or types of these psychotics. Therefore, one cannot be positive that Ackerman was studying only schizophrenics. Note also that the demographic and sociological characteristics of the sample are not reported. The reader is given no information concerning the age, sex, ethnic, educational, and social class status of the study group.

Control groups of any kind were not designated by Ackerman nor did he report concerning his methods of gathering "data" -- or, in this case, impressions. In short, this is more of a clinical-impression study than it is an objective and systematic investigation of a designated study and control group.

Alanen (1958a) published a voluminous work (362 pages, including verbatim case histories, interview materials, Rorschach test results, and demographic statistical tables and charts) which is generally considered by most family interaction researchers to be one of the best methodological efforts conducted to date.
Alanen studied the mothers of 100 schizophrenic patients (50 male and 50 female) and designated control groups consisting of 20 neurotic patients and 20 "normal" individuals and their mothers. The neurotic sample was composed of nine male patients and eleven female patients and their mothers. The normal group was composed of eight male and twelve female patients and their mothers. These groups, then, were fairly comparable according to sex of the index subject.

These three groups were also reported to be very comparable (using the group frequency method of comparison) concerning the age of the patient and mother at the time of the investigation. However, these groups were not well matched concerning the place of residence of the patients and mothers at the time of the examination, the place of residence of the family during the childhood of the patient, and the place of residence of the mother during her own childhood.

When the study groups and control groups were compared concerning the important variable of family social status (as measured by a classification of the father's occupation), it was reported that the schizophrenic and neurotic groups were very comparable. However, the schizophrenic and neurotic groups were not comparable concerning family social status with the normal group. Simply, the normal group had a considerably higher status on this measure. For example, 25 percent of the fathers of normals had a job which was dependent upon university and professional training. Only 8 percent and 5 percent of the fathers of the schizophrenics and neurotics respectively held such an occupational position.
Unfortunately, the comparability of these groups was not analyzed in regards to other demographic and sociological variables such as religion and ethnicity.

Alanen and his co-researchers used two basic methods to gather data. First, they conducted one and sometimes two (in 25 cases) standardized, psychiatric interviews with these mothers. Each interview session lasted a little over two hours. Secondly, the research team administered the Rorschach Projective Test to these mothers. These tests were "blindly" interpreted by two judges.

A strength of this study was Alanen's decision to classify his patients as either "process" or "reactive" schizophrenics. An analysis of the study findings revealed differential findings for each diagnostic type. The mothers of process schizophrenics were found to be more aggressively dominant than the non-psychotic groups, whereas the mothers of reactive schizophrenics were found to be warmer and softly-overprotective towards their child.

The sex of the offspring was also nicely controlled in the data analyses. Again, differential results were obtained according to this variable. The mothers of male schizophrenics were reported to be "possessively protective", while the mothers of female schizophrenics were reported to be "inimically protective."

The results of the data analyses are reported in a basically descriptive fashion with some presentation of statistical tables. Most of the higher level statistical data is contained in the appendices of this work.
Alanen reached these general conclusions based upon his interviewing procedures:

In the interviews the majority of the mothers of the schizophrenic patients revealed psychopathologic traits which strongly departed from the usual. The mothers in two control groups were definitely less disturbed. This was true not only of the psychodynamical matters connected with the mother-child relationship, but also of their personality characteristics of a more general kind. In interviewing the mothers of the schizophrenic patients my attention was attracted first and foremost by their relatively frequently occurring anxiety and inward insecurity, their proneness to unrealistic behaviour and thought patterns, approaching the psychotic level; by schizoid traits; by aggressiveness; by the poverty and coldness of their emotional life and their lack of empathy; and by their proneness, in spite of their disturbedness, to dominating rather than submissive patterns of interpersonal relationships, particularly as far as those of their children who developed schizophrenia were concerned." (pp. 115-116)

Again, like so many other studies, the mother of the schizophrenic is characterized as over-domineering in her relationship with her child.

It is also reported that the Rorschach protocols supported almost exactly the above conclusions. However, no differences according to the reactive-process distinction were found when using the Rorschach.

Aside from the lack of comparability of these three groups on some variables, there are several other problems with this study which should be considered. First, Alanen states that almost all the randomly selected mothers of schizophrenics seemed anxious to cooperate in the study, whereas the other two control groups were composed only of women whom the researchers could locate who were willing to cooperate. Therefore, the selective factor of "willingness to cooperate" played a major role in the construction of the neurotic and normal groups. Perhaps, then, the findings obtained for these groups are
biased by this selective factor.

The desire to cooperate among the mothers of schizophrenics may have been related to their possessive attitudes towards their "poor sick children." Therefore, these findings of maternal dominance may be more a reaction to their children's disorder than it is a causally related factor.

Alanen concludes by recognizing the possibility that genetic factors may also be etiologically associated with the incidence of schizophrenia. However, Alanen remains confident that the primary causal factors are disturbed parent-child relationships. He feels his findings simply point more to the interpersonal theory.

This study must be credited with being one of the first studies to use several control groups. The researchers also are to be credited with their honest recognition of the major weaknesses of their study, their attempts to use a well-standardized interview schedule, and their control in the data analyses of the variables of sex of the patient and diagnostic sub-type of the patient. However, several weaknesses (especially errors of omission such as not controlling for religion and ethnicity) still characterize this study making it basically methodologically inadequate -- especially in regards to specific sociological criteria.

Another frequently cited study was conducted by Behrens and Goldfarb (1958). The subjects of this study, however, were childhood schizophrenics whose mean age was 8.8 years. This study, then, does not qualify for analysis in this paper. Again, note that this is another example of how studies of childhood schizophrenics are often
lumped together with studies of late adolescent and adult schizophrenics in literature reviews and in efforts to summarize the "direction of evidence."

The same problem characterizes a study by Block, et al. (1958). These researchers were investigating the parents of autistic children. This study is also disqualified from analysis here.

Gibson (1958) compared a group of manic-depressive psychotics with a group of schizophrenics concerning the "family background" and "early life experiences" of these individuals. A standardized questionnaire was constructed by the researchers for use in this study. It was administered in an interview setting.

By comparing group frequencies concerning certain variables, the researchers report that the manic-depressive patients had a mean age of 49 years, while the schizophrenics had a mean age of 35 years. This is a substantial difference which weakens one's confidence in the findings obtained. These groups, however, are reported to be very comparable in regards to race and sex of the patients. The manic-depressive group had 27 members, while the schizophrenic group had 17 members. Unfortunately, other demographic, sociological, and psychological variables characterizing these groups were not held constant nor were they clearly described to the reader.

A major weakness of this study is the nature and inconsistency of its data sources. That is to say, in most cases, interviews were conducted with the families of these patients, but in eleven of twenty-seven cases, the manic-depressive patients served as the primary
informant. Note here that in the former case the exact breakdown of who were the family members interviewed is not provided for the reader. In the latter case, the reliability of a patient's responses may be questionable due to his state of mental health.

The questionnaire differentiated these two groups clearly concerning the parent-child interaction patterns. The researchers concluded that the schizophrenic child is used in a symbiotic manner by the parents. That is, the parents were found to offer the child love in return for behavior designed to fulfill the needs of the parents -- such as demanding that the child remain completely dependent upon the parent. The manic-depressive parents did not display such a syndrome.

Jackson, et al. (1958) asked twenty internationally respected psychiatrists to describe their clinical impressions of parent-child relationships in families with schizophrenic children by sorting descriptive statements concerning different aspects of parent-child interaction along a scale of accuracy or inaccuracy. This technique is called a "Q-Sort Test."

A factor analysis of the sorting revealed three major types of fathers: (1) the "defeated" father who is socially awkward and pathetic; (2) the "autocratic" father who is occupationally successful but lacks the ability to display warmth and affection; and (3) the "chaotic" father who is anxious and indecisive. This factor analysis also revealed three major types of mothers: (1) the "puritanical" mother who is over-domineering and controlling towards her child; (2) the weak, anxious, and helpless mother who wants to be controlled
and managed by others; and (3) the "Machiavellian" mother who constantly attempts to gain power and control within the family by devious and unethical acts. This mother is also quite hostile and unforgiving.

Note here that these results were based upon the subjective evaluations of the psychiatrists. Note also that these psychiatrists were never given the opportunity to report concerning the uniqueness of these findings. That is, they did not have the opportunity to point out that many of these same "findings" may apply to the parents of homosexuals, drug addicts, autistics, etc.

Perr (1958) used the Minnesota Multiphasic Personality Inventory, the Thematic Apperception Test, and the Interpersonal Check List to study the parents of autistic and normal children between the ages of five and nine years. Again, such a study is disqualified from consideration here because its subjects were children with a diagnosis of "autistic."

Wynne, et al. (1958) published a study which has been cited in literature reviews perhaps more often than any other study with the exception of Bateson, et al.'s (1956) "double-bind" article. Direct analysis of this article reveals that this "study" is more an initial investigation of a hypothesis carried out in a methodologically crude manner. Wynne, et al., readily point out that their article is simply "...a preliminary statement of a theory of schizophrenia, not by any means a theory attempting to account systematically for all schizophrenic phenomena, but, rather, a search for a
coherent viewpoint about certain features of schizophrenia" (p. 205).

This theory was based upon a long-range study at the National Institute of Mental Health begun in 1954. In this study, entire families with a schizophrenic member were investigated. The schizophrenic patient received intensive psychotherapy in the hospital while the parents were seen twice weekly on an out-patient basis. Observations and social history information from these sessions were compiled along with "...data from other family members, as well as the nursing staff and the ward administrator..." in order to reconstruct the history of the family interaction patterns (p. 206).

Note here that the actual number of families studied was not mentioned nor were control groups designated. The specific data collection procedures and the demographic, sociological, and psychological characteristics of the study group were not described. From this study these researchers offer the hypothesis that "pseudo-mutuality" in family interaction patterns is a necessary, but not sufficient, condition for the development of schizophrenia. This concept refers to the interactional relations between the members of a family. It is explained as follows:

In pseudo-mutuality emotional investment is directed more toward maintaining the sense of reciprocal fulfillment of expectations than toward accurately perceiving changing expectations. Thus, the new expectations are left unexplored, and the old expectations and roles, even though outgrown and inappropriate in one sense, continue to serve as the structure for the relation. (p. 207)

This somewhat obscure concept refers essentially to family members who establish and maintain a facade of being sharing, understanding, and open towards each other when actually the role structures
in the family are rigid and oppressive -- completely non-responsive to pressures for change. This situation, it is hypothesized, pressures the developing pre-schizophrenic child not to diverge from his initially dependent role. Simply, the child's desire for independence is frustrated and he is not able to develop a self-identity separate from the definitions of him made by the role structure of his family.

According to this theory, this situation of pseudo-mutuality leads to the use of a social mechanism termed "the rubber fence." Because the family, when characterized by pseudo-mutuality in the role structure, views itself as a self-sustaining social system, all social contacts made with individuals outside of the immediate family must somehow be redefined as a family contained and controlled social function. Therefore, when an individual in the family interacts socially with a non-family individual, the family momentarily expands its boundaries to include this interaction sequence by defining it as a family regulated act. Notice then, that because of this expanding "rubber fence" (i.e., family social boundaries), the child's efforts to become an independent social agent are constantly monitored and controlled by the other family members. Simply, the child is never "let out" of the social boundaries of his family. Therefore, hypothesize Wynne, et al., the child never has a chance to develop an independent self-identity or to develop accurate meaning systems concerning the realities of the social world.

This particular theory is probably the most sociological, per se, of all the theories considered in this investigation. That is,
the focus here is on the family as a social system and its predominant role structure. Unfortunately, the concepts of "pseudo-mutuality" and "rubber fence" are somewhat obscure, and too few examples are presented to exemplify how these concepts are manifested in the particulars of family functioning and interaction patterns.

Zuckerman, Oltean, and Monashkin (1958) conducted a study to test "...the hypothesis that mothers of schizophrenics have more severe (controlling and rejecting) parental attitudes than mothers of normals" (p. 307). Using a form of the Parental Attitude Research Instrument originally constructed by Shoben (1949), the researchers investigated 42 mothers of male and female hospitalized schizophrenic patients and 42 mothers of "normal" individuals.

The control group of mothers of normals matched very well (using group frequency calculations) with the study group in regards to the level of education of the mothers, and the sex of the schizophrenic offspring (21 males and 21 females in each group). However, the comparability of these groups concerning other demographic and sociological factors was not discussed.

The analyses of the questionnaire results revealed that the hypothesis of the study was not supported. The only significant difference found between these groups was that the mothers of schizophrenics scored significantly lower on the maternal strictness scale of the questionnaire than did the mothers of normals. Note here that the finding that the mothers of schizophrenics were not seemingly more controlling and rejecting than were mothers of normals is contrary to the findings of most family interaction studies.
Bowen (1959) attempted to study the role of the father in families with a schizophrenic patient. A total of ten families (father, mother, and patient) formed the study group. Four of these families lived together on a psychiatric ward in a research center and participated in family psychotherapy sessions for up to two and one-half years. The other six families were treated and studied in an out-patient family therapy setting for periods up to two years in duration. Detailed twenty-four-hour-a-day observation records were continuously kept concerning the families living together in the research center. Information from family psychotherapy sessions and similar sessions involving the other six families were also used to evaluate family interaction patterns.

Bowen and his co-workers attempted to view the father as part of a social system -- not as an individual per se. They concluded from their data analysis that the father and mother were "emotionally divorced." The most frequently discovered family pattern was an intense dyadic relationship between the mother and the pre-schizophrenic child which excluded, often with the father's approval, the father from social participation. It was also found that these families seemed incapable of making decisions when together.

This study has several weaknesses. First, the details of how the data were collected and analyzed were not presented in the article. Control groups were also not designated, nor were the demographic and sociological characteristics of the study group described. And, of course, a sample size of ten is not large enough to really give one confidence in the generalizability of the findings. And finally, the
study findings seemed to focus more on marital patterns per se than they did on the father as a part of a familial social system.

Brodey (1959) issued a preliminary report of a major study which was later published under Bowen's name (1959). See Bowen's study above in this paper for a description of this research effort.

Fisher, et al. (1959) studied the parents of a group of hospitalized schizophrenic, white males, a group of hospitalized neurotic, white males, and a group of hospitalized and non-hospitalized, white normals. There were 20 subjects and their parents in each group. These groups were well matched on the variables of age, sex of the patient, educational level of both parents, and the intactness of the family (i.e., the parents in all these cases were living together). No information, however, was provided concerning the ethnic, occupational, and religious orientations of these families.

Using interviews and a battery of projective tests, these researchers were surprised to find very little difference between the parents of neurotics and the parents of schizophrenics on several measures of marital and child-rearing patterns. These authors simply reported that these findings were "vague, indefinite" (p. 158). Note, however, that the two patient groups were clearly distinguishable from the normal group on these same measures. These data gathering techniques only clearly differentiated the neurotics and the schizophrenics in the following two ways: (1) "Parents of schizophrenics verbalize more hostility about their spouses than do parents of normals and neurotics" (p. 158); and (2) parents of schizophrenics
agreed the least concerning questions regarding the assets and liabilities of their sons.

This study is important in that it did not readily differentiate between the characteristics of parents of neurotics and of schizophrenics. These findings are contrary to the general assumptions of family etiological theories concerning schizophrenia.

Freeman, Simmons, and Bergen (1959) interviewed the mothers of 20 male schizophrenics and of 20 male manic-depressive patients. They also interviewed the wives of 20 patients with other non-organic psychiatric disorders and the sisters of several schizophrenic patients. Items taken from the Shoben Parent Attitude Survey (Shoben, 1949) were used to obtain information concerning the possessiveness of the patient's mother towards the patient.

These researchers reported that no significant differences were found between the manic-depressive and schizophrenic patient groups.

Note that control groups were not designated. And, the researchers admit that they should have controlled for the educational level of the mothers because their data analysis revealed that those who were more possessive were less educated. And finally, the other sociological characteristics of this group were not mentioned. In short, little confidence may be placed in these findings due to the above mentioned methodological inadequacies.

Haley (1959a) published an article which is often listed in literature reviews as a study — yet Haley clearly states that this
article is a theoretical presentation only -- not an empirically
designed research effort.

Based upon his observations and analyses of the verbal com-
munications of schizophrenic patients, Haley reports that it seems
accurate to describe these verbal messages as incongruent. He then
hypothesizes that the schizophrenic gives off incongruent messages
so that he can avoid indicating what behavior is to occur in his
interpersonal relationships. By using this technique, the schizo-
phrenic can avoid defining his social relationships with other people.
According to Haley, it may be then hypothesized that the family of
the schizophrenic may have socialized the child to use these techniques.
In essence, schizophrenic behavior is learned within the child's
family setting. He says:

Preliminary investigations of schizophrenic patients inter-
acting with their families suggest that the patient's way
of qualifying his statements incongruently is a habitual
response to incongruent messages from his parents." (p. 331)

Haley concludes his article by discussing how the "double-bind"
(see Bateson, et al., 1956) procedure is one way that a child may
receive incongruent messages from his parents.

Jackson (1959) developed a classification system for family
interaction patterns. Based upon two years of observing and inter-
acting with schizophrenics and their parents and siblings in conjoint
psychotherapeutic sessions, Jackson felt that these families could be
broken down into four basic types. Three of these types exert a
clearly negative influence upon the personality development of the
child. Therefore, the etiology of schizophrenia may possibly be
associated with these disordered interpersonal environments. Note that Jackson presented no information concerning the number of families observed, the demographic and sociological characteristics of these families, or the percentage of the total number of families observed who fell into these "pathological" familial classifications. Simply, this article seemed to be more an exercise in theory building than an empirical attempt to validate family etiological theories concerning the incidence of schizophrenia.

Klebanoff (1959) administered a parental attitude questionnaire to mothers of schizophrenic, brain-injured, retarded, and normal children. Since the subjects were "childhood schizophrenics", this study is disqualified from consideration in this paper.

Lane and Singer (1959) administered a questionnaire and projective tests to 48 "middle-class" normals, 48 "middle-class" schizophrenics, 48 "lower-class" normals, and 48 "lower-class" schizophrenics in an effort to determine the attitudes of these subjects towards their parents. Note that these researchers were especially interested in the differential effects of social class upon the responses offered by the subjects. These groups were matched extremely well on the variable of socio-economic status. They were also well matched in regards to age, religious orientation of the subjects, the number of siblings in the subject's family, the birth order position of the subject, the ages of the living parents, the educational level of the subjects, the intactness of the family group through the subject's first eight years of life, and the subject's place of birth.
These researchers concluded that, when controlling for socio-economic status, the schizophrenics generally reported more maternal dependence, maternal rejection, maternal dominance and interparental friction than did the normal group. The social class differences discovered between the two schizophrenic groups revealed that the middle-class schizophrenics tended to "...verbalize considerably more conflict and problems in family relationships, while the lower-class pattern seemed to stress denial of hostility and overidealization of the mother" (p. 338).

Myers and Roberts (1959) conducted an intensive interview procedure with the following subjects: (1) seven male and six female schizophrenics from Hollingshead and Redlich's (1958) Socio-Economic Class III; (2) six male and six female schizophrenic patients from Class V; (3) six male and seven female psychoneurotics from Class III; and (4) six male and six female psychoneurotics from Class V. Although these groups were well-matched and analyzed concerning socio-economic status, the researchers admit that these subjects come from very mixed religious and ethnic backgrounds. These groups were also not well matched for age as the subject age range was from 22 to 44 years.

The interview schedule was a standardized set of questions designed to get as much information as possible concerning a patient's family environment during his childhood.

Myers and Roberts concluded that schizophrenics of both socio-economic levels were generally exposed to more "stresses" and "presses" of a negative nature than were the psychoneurotic subjects. For
example, the schizophrenics experienced more general social disorganization in the home (e.g., marital conflicts between the parents) and received less parental affection, guidance, and control than did the psychoneurotics.

The schizophrenic group itself did report somewhat differentially according to the socio-economic status of the families. Class III schizophrenics more often reported anxiety due to guilt because they were not meeting their parents' desires for the child to be "successful." This group also reported more conflicts and frustrations due to their inability to fulfill their own mobility aspirations. Generally, the parents in this group were adequate role models for the child. In contrast, Class V subjects seemed to suffer more from adverse economic conditions, social isolation from non-familial individuals, and neglect, rejection, and lack of love and appropriate role modeling behavior on the part of the parents. Simply, the Class V group seemed to experience life problems to a more severe degree. This is a significant finding, concluded the authors, in that most studies (e.g., Hollingshead and Redlich, 1958) report that most schizophrenics come from Class V. Perhaps, then, it can be logically hypothesized that the conditions of the lower classes are most conducive, in an etiological sense, to the development of schizophrenic behavior.

This study is of considerable value to theorists in this field. Unfortunately, its failure to control for the effects of religion and ethnicity restricts the degree of confidence which may be placed in the findings.
Ryckoff, Day, and Wynne (1959) conducted a study very similar to the one earlier conducted by Wynne, et al. (1958). These researchers based their conclusions on "clinical observations" made of hospitalized schizophrenic patients as these patients participated in intensive psychotherapeutic sessions. These "impressions" were also derived from observation of psychotherapeutic sessions with parents which were held twice a week on an out-patient basis (p. 110). Note here that detailed information concerning the size and nature of the study group was not presented, nor were control groups designated. The data gathering techniques were also not specifically discussed in the article.

These researchers found that the members of a family with a schizophrenic patient played very rigid and stereotypical familial roles. These roles reduced life events to unrealistically simple dimensions. According to Ryckoff, Day, and Wynne, the members in these families seem to behave as if they were playing a role in a theatrical performance. Such role playing, it is hypothesized, may foster unrealistic or schizophrenic behavior by a family member.

Schofield and Balian (1959) compared interview records of 119 hospitalized non-psychiatric patients and 178 hospitalized schizophrenic patients. These groups were well matched according to age, sex, marital status, and socio-economic status. The normals, however, did have a higher level of educational achievement. Unfortunately, these groups were not analyzed as to their religious and ethnic orientations.
Using a checklist of variables to analyze the interview records as to the history of mother-child relations, these researchers concluded that no consistent differences in the social life experiences of the subjects were evident. Note that this finding is contrary to the results of most family interaction studies.

Beck (1960) and Boatman and Szurek (1960) studied the families of schizophrenic children. As explained above, studies of childhood schizophrenics do not qualify for analysis in this investigation.

Bowen (1960) conducted a study and concluded that: "The schizophrenic psychosis of the patient is, in my opinion, a symptom manifestation of an active process that involves the entire family" (p. 346).

Bowen's research project started in 1954 and ended in 1957. In this project fourteen schizophrenic patients and their parents lived together in a psychiatric ward for varying lengths of time. On the average, each family lived in this manner for two years. During this period, the patient and his parents participated in psychotherapeutic sessions and in individual interview sessions. Staff observations of the familial interaction patterns were also constantly noted and recorded for later analysis.

Bowen did not observe a normal group for comparison or control reasons, nor did he offer a detailed description of the demographic and sociological characteristics of his study families. Another problem with this study was the possibility that the family
interaction patterns observed may have been more a reaction to the
unnatural living environment than it was typical or natural family
behavior. Bowen himself admitted that although attempts were made
to make the ward like home in atmosphere, they simply may not have
completely eliminated this problem. Bowen also admitted that the
constant presence of ward personnel may have affected the typical or
natural interaction patterns which usually characterized these fami-
lies.

Bowen reported these findings:

...the child becomes the "important other" to the mother.
Through the child, the mother is able to attain a more
stable emotional equilibrium than had otherwise been pos­
sible for her. The "tiny helplessness" of the infant per­
mits her to function securely in an overadequate position.
The emotional stabilization of the mother then enables the
father to have a less anxious relationship with the mother.
Thus, the functional helplessness of the infant makes it
possible for both parents to have a less anxious adjust­
ment. (pp. 364-365)

Once the importance of this child for familial stability has been
recognized, says Bowen, the parents then attempt to keep the child
helpless and dependent upon the mother all throughout his life. The
child, therefore, does not develop an independent sense of self.
During adolescence, however, the child develops a great desire to
reach independence, yet he realizes his symbiotic tie to his mother.
The anxiety and confusion of this conflict leads, according to Bowen,
to the onset of psychotic behavior.

Clausen and Kohn (1960) interviewed hospitalized and non-
hospitalized schizophrenic patients concerning their relationships
with their parents during the patients' childhood. In all, forty-five
schizophrenics were interviewed. An additional twelve cases were studied by interviewing either the parent or some other close relative instead of the patient himself.

A control group was constructed which was perfectly matched according to the age and sex of the patient, the father’s occupation, and the child’s place of residence during childhood (Hagerstown, Maryland). Unfortunately, information concerning the religious, educational, and ethnic characteristics of these groups was not provided.

These researchers reported that they found the mothers of the schizophrenics to be the supreme authority figures in the home, while the fathers appeared to be very weak and passive. Clausen and Kohn speculated that such familial organization may have had negative influences upon the child's personality development and, therefore, may be etiologically associated with the incidence of schizophrenia in a family member.

Clausen and Kohn readily admitted two major weaknesses of their study. First, they point out that using schizophrenics as informants for data compilation may be questioned as to the ability or willingness of these subjects to give an accurate retrospective account of their childhood relations with their parents. Perhaps the information provided by these subjects was more a product of their disorder or their hostility towards their parents.

A second problem here was that the general social class status of the study and control groups were not calculated. Therefore, said Clausen and Kohn, the differences detected between these
two groups may have been more a product of such class differences than of true differences between "schizophrenogenic" and normal families.

Farina (1960) compared the attitudes of parents of male schizophrenics and male tuberculosis patients towards themselves and their children. The Parental Attitude Research Inventory (Schaefer and Bell, 1955), a questionnaire, was used to gather this information. Farina also analyzed the tape recordings made of parental discussions concerning how they would handle certain hypothetical situations involving their child.

These two groups, each containing twelve sets of parents, were said to be well matched according to race, length of the son's hospitalization, socio-economic status, age of the sons, and the educational level of the subjects. Note, however, that Farina failed to formally present the specific information necessary to document these claims.

Farina reported that the parents of schizophrenics displayed more marital conflict than did the parents of tuberculosis patients. The schizophrenic patients also experienced more domination by one specific parent than did the tuberculosis patients.

It is important to mention here that this is one of the few studies which analyzed the results according to whether or not the schizophrenic patients were considered to be "process" or "reactive" schizophrenics. Farina reported that process schizophrenics had very domineering mothers, whereas reactive schizophrenics had very domineering fathers. This latter finding suggests that other studies
should consider or "hold constant" this important diagnostic distinction.

Farina is to be credited for admitting that his findings may not be generalizable to other schizophrenic families because these parents were placed in an unnatural "experimental situation" (p. 37).

Haley (1960) conducted what he termed a theory building study -- not designed to provide specific findings in regards to rigidly defined hypotheses. Haley observed interaction patterns of families containing a schizophrenic member as they participated in family therapy sessions. He also tape recorded these sessions for constant re-analysis of the interaction patterns of these family members during these sessions.

Haley studied "intensively" ten families containing a schizophrenic offspring. Another ten families were observed over a shorter period of time. Unfortunately, Haley did not say what he meant by "intensive". That is, the number of times these families were observed was not discussed. Haley also did not establish control groups. The only information provided concerning the study group was that they were from various socio-economic levels and that the patients ranged in age from 12 to 40 years.

Haley reported that these families manifested different kinds of interaction patterns. For example, in some families the members gave off incongruent and self-contradictory statements to each other. In other families, no members were allowed to act as family leaders. And finally, in other families the mother was never blamed for anything in such a way that she could accept these criticisms as reasonable.
With these findings, Haley theorized that schizophrenic behavior represents the child's attempt to adapt to an abnormal or pathological situation. Simply, the child denies the "reality" of this family situation by escaping into a schizophrenic "reality."

Haley concludes by pointing warning that the familial characteristics which were detected may represent more a family's reaction to their child's disorder than a cause of that disorder.

Kaufman, et al. (1960) studied forty sets of parents of schizophrenics at an out-patient clinic and forty sets of parents of schizophrenics at an in-patient institution. These parents were studied on a long-term basis (one to ten years) using the following procedures: (1) information gathered during psychotherapeutic sessions with the parents and child; (2) administration of psychological tests; and (3) direct researcher observation of parent-child interaction patterns.

Unfortunately, no control groups were designated for study nor was information provided concerning the demographic or sociological characteristics of these subjects. The only information provided was that these schizophrenic patients ranged in age from six to seventeen years. This, of course, is problematic in that "childhood" schizophrenics are being lumped together with "late adolescent" and "adult" schizophrenics. This is a major weakness which may invalidate the findings obtained by this study.

Kaufman, et al., reported that "...these parents all show a similar core disturbance" (p. 920). That is, these parents were
inwardly anxious, denied reality, displayed severe forms of defense mechanisms, and seemed to feel "destructive forces" within themselves (p. 920).

Weakland (1960) discussed the possibility that Bateson, et al.'s, two-party "double-bind" situation could also be evident in three-party interaction situations. Weakland theorized that such a situation could also be etiologically associated with the onset and development of schizophrenic behavior. Weakland reported that:

Our general point of view and our particular concepts and hypotheses are based on detailed and intensive study of tape and film records of the actual communication of patients with people playing important parts in their lives. Initially we studied mainly the communication of patients and therapists in individual interviews, but for several years now we have been concentrating more and more on the interaction of patients with their family members, in family therapy sessions or just as a family group. This paper, however, presents only a limited amount of our own primary data. (p. 374)

Weakland then describes in detail how two individuals could place another individual in a double-bind by relating to this individual contradictory messages.

Note here that no control groups were designated nor were the numbers or demographic and sociological characteristics of the subjects discussed by Weakland. And, finally, the specific methods used to study the recordings of the subjects' communications were not described.

Garmezy, Clarke, and Stockner (1961) studied the child-rearing attitudes of mothers and fathers as reported by fifteen "good premorbid" and fifteen "poor premorbid" schizophrenic, hospitalized male
patients and fifteen non-psychiatric, hospitalized "normal" males. These three groups of patients were asked to recall their early adolescence by responding to a 75-item child-rearing attitude scale as they believed each of their parents would have responded to the items at that time. This scale purportedly measured parental over-protectiveness, dominance, and an "ignoring" attitude towards the child.

These groups did not differ significantly in length of patient hospitalization, mean age of the patients, or in regards to the educational level of the subjects and parents. These groups were also "comparable" concerning socio-economic status (p. 177). Garmezy, et al., report that the "...largest proportion of fathers in both groups had been farmers and semi-skilled factory workers" (p. 180). Unfortunately, other major demographic and sociological characteristics such as religion and ethnic status were not discussed.

This study concluded that generally the schizophrenic patients reported that their parents displayed more "attitudinal deviance" than did the parents of normals. More specifically, the poor premorbid schizophrenics reported mostly maternal dominance, whereas the good premorbid patients reported mostly paternal dominance. Note that these findings were the same as Farina's (1960) if one assumes that good premorbid schizophrenia is similar to "reactive" schizophrenia and that poor premorbid schizophrenia is similar to Farina's "process" schizophrenia. This general equation is generally considered valid by most psychologists and psychiatrists. Therefore, Garmezy, et al.'s findings nicely support Farina's findings.
Lu (1961) conducted an "exploratory investigation" (p. 134) of mother-child relations between fifty male schizophrenics and their "well" siblings. These siblings acted as the "control" group in this situation.

Lu reported that "most" of these patients were under 35 years of age (p. 133). "Most" of the well siblings studied were of the same sex as the patient and were near the patient in age. All subjects had at least attained a grade school education. (This is weak in that it allows for considerable variation among the subjects regarding level of education obtained.) It was also reported that most of these patients were Catholic. Lu also reported that most of these subjects were from a predominately immigrant background, but they did vary considerably in regards to the ethnic groups to which they belonged. All subjects were from the lower socioeconomic class according to Warner's index (1949). Generally, then, this sample and control group were quite non-comparable regarding some variables while being only "mostly" homogeneous concerning other variables.

Lu used four basic techniques to gather data: (1) repeated interviews with schizophrenic patients; (2) observations of patient behavior on the hospital wards and grounds; (3) intensive interviews with the parents of the patient, his sibling, and other significant persons (e.g., friends and other relatives) in the lives of the patients; and (4) administration of the Thematic Apperception Test to some of the patients and siblings.

Lu concluded that: "Since early childhood, the pre-schizophrenic child and the mother had been preoccupied with each other's
feelings and responsiveness. Strong feelings, both positive and negative, had developed between them" (p. 136). Connected to this was the finding that the mother seemed to be unusually overprotective and overdominating towards the preschizophrenic child. According to Lu, such relations were not found between the "well" sibling and this same mother.

Although these differential maternal attitudes may support a family theory regarding the etiology of schizophrenia, Lu admitted that some evidence was available which may have indicated that the mother's behavior may have been more a reaction to some initially abnormal characteristic of her child. Lu says:

The mother-child dominance-dependence role relations invariably lead to other interesting questions: Why had the mother exercised more authority over her preschizophrenic child than over her non-schizophrenic child? Why had the patient, but not the nonschizophrenic sibling, become so emotionally entangled with the mother and so dependent on her? This process of interaction between mother and child seems to have begun early in their relationship -- that is, at the time of the child's birth and during his infancy. The search for the differences in early patterns of behavior of the schizophrenic patient and the nonschizophrenic sibling has thus far yielded some clues which remain to be tested. One clue appears to be that the patient was an unusual, or sick infant, cried more, and was more excitable than the nonschizophrenic infant sibling. Some such differences at birth and during infancy may have led the mother to pay more attention to the unusual or sick or more crying child than to the other child. (p. 139)

MacAndrew and Geertsma (1961) replicated, with one statistical revision, Jackson, et al.'s, study (1958) which has been discussed above in this paper. Using a Q-sort, this study aimed to determine how twenty psychiatrists, many with "international reputations,"
conceptualized, based on their professional experiences, the "schizophrenogenic" parent (p. 82). This study revealed that the mother was most often seen as the schizophrenogenic parent. She was described as "hostile" and "rejecting" or "unbending," "fearful," or "inadequate" (p. 82). This study suffered from the same weaknesses discussed in relation to Jackson, et al.'s, study (1958).

McGhie (1961a) interviewed and administered psychological tests to the mothers of 24 "normals", 20 schizophrenics, and 20 neurotics concerning their attitudes towards their children and concerning their own personality characteristics.

These three groups were very well matched concerning the age of the mother, the age of the offspring subject, and the socio-economic status of the family. Unfortunately, no information was reported concerning other demographic and sociological characteristics of these families.

McGhie must be credited for pointing out that a "willingness to cooperate" factor may have biased the findings. This was especially evident with the mothers of normals in that of 44 mothers who were randomly selected for study, only 20 were willing to cooperate with the study. A similar problem existed for the parents of neurotics. Here 14 of the 34 individuals originally selected refused to cooperate.

McGhie reported that the differences between the mothers of neurotics, schizophrenics, and normals were quite evident. The normal mothers had healthy attitudes about sex, were sensitive to the
needs and feelings of her child, and were willing to give the child reasonable independence and autonomy in the family setting. The mothers of neurotics and schizophrenics, however, held generally opposite attitudes.

Differences between the attitudes of the mothers of neurotics and of schizophrenics were also evident. The mother of the neurotic was found to be more "overprotective" towards her child than was the mother of the schizophrenic. This is a finding generally contrary to the findings of other studies. The mothers of schizophrenics were found to be more illogical and irrational in their thinking and attitudes concerning the child.

McGhie (1961b) published another article based upon his first study (1961a) which has been discussed above. Using the same study and control groups he administered three psychological tests to these mothers: (1) the Sentence Completion Test (Rotter and Willerman, 1947); (2) the Word Connexion List (Crown, 1952); and (3) the Rorschach Test scored according to a system devised by Klopfer, et al. (1954).

McGhie found a clear difference among the scores of mothers of normals, neurotics, and schizophrenics. The mothers of schizophrenics were found to be clearly the most abnormal in their thinking, values, and attitudes. The major finding was that many of the mothers of schizophrenics had pressing needs to manipulate others in accordance with their basic egocentric needs. And, this type of mother was found to have the capacity to "...project, deny, rationalize and distort reality to suit her own needs" (p. 217).
Rosenbaum (1961) studied "about" fifty schizophrenic patients by studying descriptive data based on case history material "...largely from firsthand reports or personal experience with the Jackson-Bateson group (Bateson, et al., 1956) and with Lyman Wynne's group (Wynne, et al., 1958)" (p. 28).

After studying these case reports Rosenbaum concluded that he had evidence to support the hypothesis that:

All the qualities of disordered thinking and interpersonal relations which have been described for the individual schizophrenic have recognized counterparts in his family. (p. 28)

Note that Rosenbaum did not offer information concerning the demographic and sociological characteristics of the families studied. A group of fifteen patients and their families were designated for study as a "contrast" group. These contrast families, reported Rosenbaum, were "...made up of psychiatric patients of various nonpsychotic diagnoses" (p. 28). Note that Rosenbaum said nothing more about this group. He did not say how they were studied nor did he offer information concerning their comparability to the study group itself. He simply reported that the "...differences between families of schizophrenics compared to those of non-schizophrenics have struck me quite vividly on a descriptive-clinical level" (p. 31).

Wolman (1961) studied 33 schizophrenic patients and as many relatives of these patients as possible over an eight-year period. Fourteen of the patients were male while nineteen were female.

Wolman studied these subjects through individual and group psychotherapeutic sessions. He readily admitted that these 33 subjects
"...do not form a sample" (p. 193). No control groups were designated. Little information was presented concerning the demographic and sociological characteristics of the study group. The only information concerning the study group offered was that the age of the patients varied from 15 to 47 years, with most of the patients (22 to be exact) in their twenties. He also reported that the majority of the study group was from the "upper-middle-class." Wolman did not say how this class evaluation was made.

Wolman's study concentrated on the fathers of these patients. He reported that: "All these fathers failed in their social role as husbands and fathers" (p. 208). The fathers were found to compete with the child for the attention of the mother. Therefore, the father was rarely "giving" towards the child.

Boszormenyi-Nagy and Framo (1962) studied ten female schizophrenic patients for three and one-half years. This study was based on observations of family (patient, mother, and father) psychotherapy sessions which were held once a week.

Boszormenyi-Nagy and Framo did not designate any control groups nor were the demographic and sociological characteristics of the patients and their families described.

This study concluded that the parents of the schizophrenics had unconscious needs for a symbiotic relationship with their child. The parents attempted to retain the child as a type of "quasi-parental object" (p. 109). This situation, according to these researchers, makes it impossible for the child to develop an independent
self-identity. Therefore, the child may manifest chronic schizophrenic symptoms.

Lu (1962) studied the present and past attitudes and behavior of fifteen male and nine female schizophrenics and their families. Lu used four basic techniques to gather this data: (1) repeated interviews with schizophrenic patients; (2) observations of patient behavior on the hospital wards and grounds; (3) intensive interviews with the parents of the patient, his sibling, and other significant persons (e.g., friends and other relatives) in the lives of the patients; and (4) administration of the Thematic Apperception Test to some of the subjects.

Unfortunately, no control groups were designated. And, the study group itself was not homogeneous concerning ethnicity, educational level, age of the patient, and religious orientation. All of these subjects were from "lower class families" (p. 233).

Lu concluded that the preschizophrenic child was usually born into a social situation where the mother was emotionally upset and experiencing many life stresses. Because of this, said Lu, the mother often communicated contradictory expectations to the child which the child attempted to fulfill.

Lu does admit, however, that the preschizophrenic child seemed more sickly than his "normal" siblings. Therefore, some of the mother's abnormal behavior may have been a reaction to the child's abnormal condition.
McCord, Porta, and McCord (1962) studied case records of twelve "psychotics". Unfortunately they did not designate the diagnoses of these patients. Therefore, this study is not eligible for consideration here as the number of "schizophrenics" in this sample was not designated.

Weakland and Fry (1962) published an article which presented selected letters of mothers of schizophrenics which were sent by these mothers to their hospitalized offspring. Weakland and Fry pointed out how these letters support the hypothesis that mothers of schizophrenics are over-possessive and domineering, while the father is weak, passive, and ineffectual as a role model. These researchers argued that these letters demonstrate that mothers send contradictory messages to their offspring.

Note here that this is not a study per se in that the letters presented were hand selected by the researchers in an effort to support their etiological arguments. They simply presented seven letters from four mothers.

Wenar, Handlon, and Garner (1962) conducted a study which is often mentioned in literature reviews. Simple examination of this study revealed that the subjects, according to the researchers, were non-schizophrenic and non-autistic "severely disturbed" children (p. 6). This study, therefore, is not eligible for consideration here.

Baxter, Becker, and Hooks (1963) used the Rorschach Projective Test to study the parents of ten poor premorbid schizophrenics, ten good premorbid schizophrenics, and ten neurotics. These researchers
specifically studied defensive styles of behavior as indices of "ego maturity" among the parents. The parents of poor premorbid patients were found to be the most immature and defensive subjects. The parents of neurotics were very similar to the parents of poor premorbid patients. The parents of neurotics were only slightly less defensive. The parents of good premorbid schizophrenics were found to be the least immature on this measure. Note here that the lack of substantial differences between the mothers of poor premorbid and neurotics casts doubt upon the "uniqueness" of these findings for an etiological theory specific for schizophrenia. And, the general differences found between the mothers of poor and good premorbid schizophrenics points out the importance of making this diagnostic distinction in any study of schizophrenics and their parents.

It is important to note that these three groups were exactly matched according to sex of the subjects. Each group contained five males and five females. These groups were also well matched regarding age and I.Q. of the patients. Unfortunately, socioeconomic, religious, ethnic, racial, residential, and occupational differences between the groups were not described.

Caputo (1963) studied patterns of interaction between parents of twenty male chronic schizophrenics and parents of twenty "normal" males. Caputo used the "revealed difference" procedure for structuring an interaction session between each pair of parents. The interaction during this session was tape recorded and then analyzed according to a modification of Bales' Interaction Process Analysis (Bales, 1950).
The patients and normals were all white, male, and comparable in age. These parents were well matched according to educational level, and socioeconomic status (determined by a scale developed by Warner, Meeker, and Eells, 1960). These families were also well matched according to the number and sex of the offspring. No information was offered concerning the ethnic, occupational, religious, or residential characteristics of the families.

The results of this study were contrary to the findings of many other studies in this area. Caputo found that the mothers of schizophrenics were not domineering nor were the fathers found to be passive, weak, and ineffectual. Surprisingly, the father appeared in most cases to be the most domineering figure in the family. This finding was congruent with the findings obtained for the parents of normals. Caputo did, however, conclude that a fundamental differentiation could be made between the two sets of parents. He reported that the parents of schizophrenics were quite hostile towards each other and towards the child. Therefore, concluded Caputo, the child does not identify with either parent. He is simply isolated within the family setting. This isolation leads to the development of schizophrenic symptoms.

Caputo must be credited with clearly admitting that his findings concerning these parents could be due to the parental reaction to having a schizophrenic child.

Haley (1963) published a book entitled Strategies of Psychotherapy which discussed some of the features of the family as a social unit which could make the double-bind situation (see Bateson,
et al., 1956) serve as an adaptive response to abnormal social relationships. Although this work is often referred to in literature reviews as if it were a study, it must be clearly stated that this work is basically a presentation of a theory.

Singer and Wynne (1963) used the Thematic Apperception Test to study the styles of thinking, communicating, and relating socially that characterized the parents of twenty autistic children, twenty neurotic children, and twenty young adult schizophrenics. These groups of parents were made comparable by matching individual pairs of parents on the following variables: age of the child, approximate age of the parents in relation to the offspring at the time of the study, number of children in the family, educational and occupational level of the parents, and sex of the patient. Unfortunately, no information was offered concerning the residential, religious, and ethnic characteristics of these families.

Singer and Wynne reported that "blind" evaluations of the test protocols revealed that the social relationships between the parents of autistics and neurotics were quite disturbed in contrast to the stable relations between the parents of schizophrenics. The parents of schizophrenics, however, were found to be quite disturbed in their styles of thinking and communicating.

Note that this study is especially significant in that it seems to find a difference between the parents of young adult schizophrenics and childhood autistics. This supports this writer's decision to disqualify from analysis in this paper those studies which
deal with autistics in that autism may be a disorder quite different in degree and kind from adolescent or adult schizophrenia.

Wynne and Singer (1963a) reported their clinical impressions derived from observations of conjoint family therapy sessions with schizophrenic young adult patients and their relatives from 1957 to 1963. These sessions were conducted at the National Institute of Mental Health and were held twice weekly.

These researchers did not designate a control group nor did they describe any of the demographic and sociological characteristics of this group. Even the size of the study group was not mentioned. These omissions, of course, are major weaknesses of this study.

Wynne and Singer offered the following conclusions:

It is our impression that offspring who become overtly schizophrenic characteristically have had family roles in which they are more deeply enmeshed in the family's emotional life than are their nonschizophrenic siblings. The schizophrenic offspring usually fill conflicted roles in which they are greatly needed, for example, to mediate between the parents, to live out an externalized representation of dissociated aspects of one or both parents' personalities, etc. The less overtly disturbed siblings, in contrast, characteristically have less subjective conflict, have not been so participant in the family struggles and have often been able to move out of the family emotionally at an early age. (p. 197)

In all fairness, it should be stated here that Wynne and Singer stressed the fact that this article was just an "exploratory" research effort.
CHAPTER V

CONCLUSIONS

This paper has documented the thesis that the great majority of family interaction studies concerning the etiology of schizophrenia are theoretically and methodologically weak. The weaknesses and failures of the "medical model" approaches to the etiology of schizophrenia have also been discussed. This chapter is concerned with possible improvements in the family interaction approaches to this question. It is suggested here that three basic changes must be initiated in family interaction research efforts so that this etiological approach can obtain increasingly significant and valid data. These suggestions are described in three sections below entitled: (1) Needed Improvements in the "Typical" Family Interaction Research Design; (2) New Directions in Research Designed to Complement the Typical Family Interaction Approach; and (3) New Types of Research Designs Which Should Be Used by Family Interaction Researchers.

Needed Improvements in the "Typical" Family Interaction Research Design

Chapter III in this paper contained a detailed discussion of the major methodological weaknesses of family interaction studies. Ideally, researchers should attempt to eliminate all of these weaknesses in their future research efforts. Of all these discussed
weaknesses, there are several which are of major concern to the sociologist. These weaknesses are discussed below.

First, much more attention must be given to the demographic and sociological characteristics of the study and, if present, control groups. Researchers should make a serious effort to determine the nature of these groups concerning, at least, the following variables: (1) age; (2) sex; (3) socioeconomic status; (4) occupation; (5) religion; (6) racial and ethnic identity; (7) place of residence; and (8) level of educational achievement of the subjects under study. And, these variables should be "held constant" in either the sample composition or data analysis procedures.

Secondly, family interaction researchers should make concentrated efforts to include in their research designs various types of control groups. As discussed in length in Chapter III, there is some evidence that non-schizophrenic populations such as homosexuals and neurotics are raised in family environments quite similar to those described as "typical" for the schizophrenic individual. Therefore, there is some doubt concerning the specificity or uniqueness of the findings obtained by family interaction researchers concerning the families of schizophrenics. Inclusion of various non-schizophrenic control groups ("deviant" as well as "normal" subjects) would do much to help resolve this problem.

Thirdly, as discussed in Chapter III and subsequently documented by example in Chapter IV, there appears to be considerable evidence that "process" and "reactive" schizophrenia are two distinct types of the schizophrenic syndrome. Therefore, it is reasonable to
argue that family interaction researchers should attempt to diagnose their schizophrenic probands as either "process" or "reactive" schizophrenics. Researchers should then "hold constant" for this important variable either by making the samples homogeneous concerning this variable or by calculating the types of data differentially associated with this diagnostic distinction in the data analysis procedures.

A fourth improvement which would benefit family interaction research efforts would be an attempt by researchers to gather historical data concerning the "initial" (i.e., during infancy) or "early" (i.e., during early childhood) behavioral, physiological, and constitutional characteristics of the preschizophrenic child. Such data would help the researcher answer this important question: "Are the parental and general familial interaction patterns which have been noted in the families of schizophrenic subjects a possible cause or an understandable reaction to the early mental and physical well-being of the subject?" Information concerning the characteristics of the infant or young child might be obtained through interviews and/or questionnaires administered to parents, relatives, and medical personnel and agencies. Such efforts would do much to help the family interaction researcher temporally order the relationships among the variables under consideration in the study.

Family interaction researchers also could improve their investigations by placing more emphasis on the specific communicable form and content of the "pathological" characteristics evident in the families of schizophrenics. And, more concentration should be
placed upon the processes of transmitting this "pathology" to the family member who eventually manifests schizophrenic symptoms.

Rabkin (1965) voices a similar suggestion:

Another area of inquiry, still untapped, is this: assuming that there is, indeed, a communication of family pathology and that the child learns faulty habits of coping and distorted modes of thinking within this context, the question remains as to how this communication is carried out, what exactly is learned, and how this learning takes place. (p. 336)

Such an analysis as suggested above would be an improvement over most family interaction studies which are primarily designed to simply isolate and describe certain parental "traits" or familial characteristics with little attention given to the communicable content and form of these characteristics and the learning processes through which they are socially transmitted. Obtaining this information might help explain why one sibling in a "pathological" familial setting develops schizophrenia and another does not. This information would also help family interaction researchers develop more specific theories which, in turn, would hopefully increase the predictive validity of these theories.

New Directions in Research Designed to Complement the Typical Family Interaction Approach

Several new types of research efforts should be initiated or at least sponsored and supported by family interaction researchers. These research efforts, which are described below, would hopefully provide data useful in the evaluation of the validity of family etiological theories as well as provide information which could be
used by researchers to improve their theoretical and methodological approaches.

First, many more studies need to be conducted which investigate the non-familial and life-long socialization and social experiences of an individual who becomes schizophrenic. These studies, of course, can be contrasted with the majority of etiological "interpersonal" research investigations which have specifically focused on the familial childhood socialization experiences of the subject. Studies of the kind suggested here (and discussed in detail in Chapter II) would help the family researcher get some perspective on the etiological significance of his research efforts relative to other interpersonal or sociological investigations which have been and are being conducted. Perhaps these more non-familial oriented studies might reveal to the family interaction researcher that a "pathological" familial setting for a developing child is just one of many antecedent conditions necessary, but not sufficient, for the development of schizophrenia.

Secondly, more research needs to be conducted concerning interaction patterns of "normal" families. Results from such investigations would help the family interaction researcher gauge more accurately the nature and degree of the "differences" or "abnormalities" found to be characteristic of families with a schizophrenic member. With information concerning families of "normal" individuals, the researcher might then ask himself: "How abnormal are families with a schizophrenic member when compared to families of normals?"
Thirdly, more research needs to be conducted concerning the subjective meaning of familial interaction patterns for the members of a family. This writer concurs with Rabkin (1965) who argues that family interaction patterns and parental behavior have too often been "...classified according to a priori categories which portray for example, 'domination' as bad, 'sharing' as good, with little concern for how these behaviors appear to the participants" (p. 332). Those research efforts which attempt to understand social phenomena from the perspective of those being studied are based upon the tenets of phenomenology, ethnomethodology, and symbolic interactionism (Blumer, 1969; Cicourel, 1964; Garfinkel, 1967; Manis and Meltzer, 1966; and Mead, 1934).

Again, Rabkin (1965) argues that it is possible "...that the influence of parental attitudes and behavior depends more on the child's perception of them than on what they 'really' are." This possibility must be pursued in future studies. The findings of these phenomenological studies will have great relevance to the family interaction researcher in that the data obtained may help to close many of the gaps in family etiological theories.

**New Types of Research Designs Which Should Be Used by Family Interaction Researchers**

There is a growing conviction among family interaction theorists (e.g., Mednick, 1967; and Mishler and Waxler, 1968b) that new types of research designs are needed to test more conclusively family interaction etiological hypotheses. Two designs, the "longitudinal" and the "foster child" approaches, have been given the most
attention. This writer concurs that these two types of research designs should be used in future research projects.

A longitudinal study would attempt to isolate populations of children who have a "high risk" for developing schizophrenia because their families display "pathological" interaction patterns which have been noted in ex post facto studies of families with a schizophrenic offspring. Here the researcher attempts to predict the development of schizophrenia in specific families.

To conduct a longitudinal-predictive study of this type, researchers must develop techniques to screen samples of families according to well standardized criteria of "pathological" familial characteristics. At the present time Morris and Wynne (1965) stand out as the real innovators in the creation of such predictive-screening instruments. However, much more research needs to be conducted concerning such techniques.

A study of this type might take a large sample of families with very young children and no record of schizophrenia in the family history. This latter requirement represents an effort to eliminate the possibility of genetic transmission. This sample would then be judged as to type and degree of the interaction patterns characteristic of each family. Those families found to display hypothetically "pathological" characteristics would then be matched with a "non-pathological" control group of families. Both groups would then be studied over time. Researchers would be interested in noting the personality development of the children in both of these groups. Here researchers might have the opportunity to chart the processes
by which an offspring is socialized with abnormal social skills and conceptions of reality. And, of course, such studies would test the predictions made that the "pathological" families had a "high risk" for schizophrenia.

Longitudinal studies, it must be noted, do present many practical problems to the research team. As Mishler and Waxler (1968b) point out, although longitudinal studies are valuable in that the time orders of variables can be established, these studies have the following serious problems: (1) sample attrition over time; (2) construction of huge samples needed because of the low incidence of schizophrenia in populations; (3) difficulty in determining what variables should be studied; (4) determining the effects of repeated observations upon the index families; (5) researcher turnover rates; (6) the necessity of a long delay before data can be gathered and analyzed; and (7) difficulty in determining the time of onset of schizophrenia.

A second type of research design which might be etiologically productive is known as the "adopted child" approach. Here researchers would study the adoptive and natural biological parents of adopted children who eventually develop schizophrenia. These parents would be contrasted with adoptive parents of children who do not develop schizophrenia. The interaction researcher would expect to find that the interaction patterns among the adoptive parents and the child and the general mental health of these parents would be more "pathological" or "schizophrenogenic" than those of the natural parents or the adoptive parents of those subjects who do not develop schizophrenia.
A very serious difficulty connected with this type of study is the difficulty of locating a study group of adopted children who have become schizophrenic. Wender, Rosenthal, and Kety (1968) conducted such a search in the eastern United States. They sent letters of inquiry to all American Psychiatric Association members and to all private and public psychiatric institutions in this region. Only 24 couples were located who had adopted a child who developed schizophrenia.

This "adoptive child" approach can be quite helpful to the theorist in that one can study the possible etiological contributions of both genetics and social experiences. The above mentioned article by Wender, Rosenthal, and Kety (1968) represents the ground-breaking research project using this approach. These researchers described their reasoning as follows:

...this technique involves the study of subjects adopted in infancy. In the Adoptive Parents Project we began with schizophrenic patients adopted in infancy and studied their adoptive parents. Since the biological parents are not the parents who rear the children, the transmitters of heredity and social experience are separated. If schizophrenia were transmitted entirely genetically, one might expect at least some of the biological parents to be disordered and the adoptive parents to be psychiatrically normal; conversely, if schizophrenia were a purely socially transmitted disorder, one would expect the biological parents to be psychiatrically normal and the adopting parents to be disturbed. However, since adopting parents in general may tend to be disturbed, it was deemed desirable to include a third group of subjects in this study: the adoptive parents of normal persons. (pp. 235-236)

The group of biological parents who reared their own children who became schizophrenic and the two groups of adoptive parents were generally well matched concerning the age, sex, religious, and educational status of the parents. The adoptive parents of normals, however,
were from a higher socioeconomic class than the other two groups.

Wender, Rosenthal, and Kety do point out that a "willingness to cooperate" selective factor did influence the composition of the study group of adoptive parents of schizophrenics. These researchers report:

Of the 214 cases reported, 11 were willing to come. From the letters of the referring physician, it does not seem that refusal to come was indicative of parental pathology. Those refusing often stated that they doubted that we could do much to help them -- a realistic judgment -- and that they feared rocking an often precarious boat. Contrariwise, many of the adoptive parents who did participate manifested almost magical expectations of help. They came to us as to a Mecca of Mental Health, a treatment source of last resource. Their agreement to come seems often to have been predicted on a childlike hope that the resources of the NIMH could do what those of more parochial facilities could not. In this respect the group may have been biased towards more immature and compliant people. (p. 214)

The findings of the study, based upon psychiatric interviews, indicated that natural parents of schizophrenics were more "disturbed" than adoptive parents of schizophrenics. The adoptive parents of normals were the least disturbed. These researchers conclude:

In accordance with the logic of the design, the results favor an hypothesis of biological transmission in schizophrenia; however, since the adoptive parents of the schizophrenics are not themselves paragons of mental health, this obviously raises the question of their contribution to the pathology in their offspring. (p. 214)

Although the results of this study are somewhat inconclusive and the study has several weaknesses (e.g., small sample size and selective factors influencing the composition of the study groups), a study of this design does provide new types of data which are helpful to the family interaction researcher. More sophisticated studies of this type should be pursued.
Future studies of adopted schizophrenics should attempt to gather information concerning the mental status of the biological parents of these same subjects. Unfortunately the Wender, Rosenthal, and Kety study did not gather such information. Therefore, it is impossible to determine if schizophrenia among the adopted children might have some genetic base due to the schizophrenia rates evident in the biological parents and relatives.

In conclusion, family interaction research efforts concerning the etiology of schizophrenia have not conclusively validated family interaction hypotheses for the various reasons discussed in this paper. It is important to point out here that family interaction researchers and other scholars should not assume that schizophrenia is transmitted either genetically or socially. Indeed, the etiology of schizophrenia may reflect an interaction of these variables. Or, schizophrenia may be a result of the interaction between these variables and even other variables. For example, Kohn (1972) reviews genetic, interpersonal, and epidemiological studies and concludes that schizophrenia, hypothetically speaking, may be a result of the interaction of: (1) unknown variables; (2) genetic vulnerability; (3) lower class familial environment and interaction patterns; and (4) psychological stress due to various life events. And, finally, perhaps schizophrenia results from completely different etiological factors operating at different times. That is, perhaps schizophrenia is in one case etiologically associated with life stresses while other times being associated with family interaction patterns, genetic modes of transmission, and biochemical or constitutional states.
All these etiological patterns are a possibility which must be considered by the researcher. Family interaction research is just one of many necessary and important empirical approaches being presently executed. Hopefully future family interaction studies and other non-familial sociological approaches will improve their theoretical bases and methodological techniques and designs. Only then will the real potential of the sociological approach to the etiology of schizophrenia be realized.
APPENDIX A

PURPORTED FAMILY INTERACTION STUDIES ANALYZED DURING THIS INVESTIGATION

Abrahams and Varon (1953)
Ackerman (1958)
Alanen (1958a)
Alanen et al. (1966)
Arieti (1955)
Bateson et al. (1956)
Baxter, Becker, and Hooks (1963)
Beck (1960)
Beckett et al. (1956)
Behrens and Goldfarb (1958)
Berger (1965)
Block (1969)
Block et al. (1958)
Boatman and Szurek (1960)
Boszormenyi-Nagy and Framo (1962)
Boszormenyi-Nagy and Framo (1965)
Bowen (1960)
Bowen, Dysinger, and Basamania (1959)
Brodey (1959)
Cameron (1943)
Caputo (1963)
Cheek (1961a)
Cheek (1965)
Clardy (1951)
Clausen and Kohn (1960)
Despert (1938)
Dworin and Wyant (1957)
Ellison and Hamilton (1949)
Escalona (1948)
Farina (1960)
Ferreira (1961a)
Fisher et al. (1959)
Fleck (1960)
Fleck (1962)
Fleck et al. (1957a)
Fleck et al. (1957b)
Fleck et al. (1959a)
Fleck et al. (1959b)
Fleck, Lidz, Cornelison (1963)
Framo (1966)
Frazee (1953)
Freeman and Grayson (1955)
Freeman, Simmons, and Bergen (1959)
Friedlander (1945)
Fromm-Reichmann (1948)
Galvin (1956)
Gardner (1967)
Garmezy, Clarke, and Stockner (1961)
Gerard and Siegel (1950)
Gibson (1958)
Goldfarb, Goldfarb, and Scholl (1966)
Guerevitz (1954)
Hajdu-Gimes (1940)
Haley (1955)
Haley (1960)
Haley (1963)
Haley (1968)
Hill (1955)
Hotchkiss et al. (1955)
Jackson (1959)
Jackson et al. (1958)
Kasanin, Knight, and Sage (1934)
Kaufman et al. (1960)
Klebanoff (1959)
Kohn and Clausen (1956)
Laing and Esterson (1964)
Lane and Singer (1959)
Lerner (1965)
Levy (1943)
Lidz (1958)
Lidz (1962)
Lidz (1963)
Lidz et al. (1956)
Lidz et al. (1957a)
Lidz et al. (1957b)
Lidz et al. (1958a)
Lidz et al. (1958b)
Lidz et al. (1962)
Lidz et al. (1963a)
Lidz et al. (1963b)
Lidz et al. (1964)
Lidz, Cornelison, and Fleck (1964)
Lidz and Fleck (1960)
Lidz and Fleck (1964)
Lidz, Fleck, and Cornelison (1965)
Lidz and Lidz (1949)
Lidz and Lidz (1952)
Limentani (1956)
Lu (1961)
Lu (1962)
MacAndrew and Geertsma (1961)
Mark (1953)
McCord, Porta, McCord (1962)
McGhie (1961a)
McGhie (1961b)
McKeown (1950)
Mednick and Schulsinger (1968)
Mishler and Waxler (1958a)
Morris and Wynne (1965)
Myers and Roberts (1959)
Nielsen (1954)
Perr (1958)
Phillips, Jacobson and Turner (1965)
Plank (1953)
Pollin, Stabenau, and Tubin (1965)
Pollock, Malzberg, and Fuller (1939)
Pollock, Malzberg, and Fuller (1940)
Prout and White (1950)
Prout and White (1956)
Rabkin (1964)
Reichard and Tillman (1950)
Reiss (1967)
Ringuette and Kennedy (1966)
Rogler and Hollingshead (1965)
Rosen (1953)
Rosenbaum (1961)
Ryhoff, Day, and Wynne (1959)
Schofield and Balian (1959)
Schuham (1967)
Sharan (1966)
Singer and Wynne (1963)
Simp (1950)
Spiegel (1957)
Stabenau et al. (1965)
Tietze (1949)
Vogel and Bell (1967)
Wahl (1954)
Wahl (1956)
Waring and Ricks (1965)
Weakland (1960)
Weakland and Fry (1962)
Wenar, Handlon, and Garner (1962)
Witmer et al. (1934)
Wolman (1961)
Wynne (1968)
Wynne et al. (1958)
Wynne and Singer (1963a)
Zuckerman, Oltean, and Monashkin (1958)
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World Health Organization.

VITA

Kenneth Eugene Kirby


In September 1970, the author entered the College of William and Mary as a graduate student in the Department of Sociology.

In September 1972, the author accepted an appointment as Temporary Instructor in the Department of Sociology at The Christopher Newport College of the College of William and Mary, Newport News, Virginia.