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PARENTAL IDENTIFICATION AND SCHIZOPHRENIA

by

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Paul H. Johnson

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ABSTRACT

The primary objective of this study was to investigate, by means of objective methods, parental identification in schizophrenia. Subordinate objectives were to investigate descriptions of self, ideal self, and parental personality, as well as verbal abstracting ability among schizophrenics. Several hypotheses were put forth. These stated, generally, that differences would be found between matched groups of reactive schizophrenics, process schizophrenics, and normal subjects on subjective measures of parental identification, perception of self, ideal self, and parental personality, and on measures of verbal abstracting ability.

Eighty male patients, all carrying the psychiatric diagnosis of schizophrenia, were selected from a state hospital population according to the following criteria: (1) rated ten points or below (reactive) or twenty points or above (process) on the Phillips Prognostic Rating Scale, (2) between nineteen and forty years of age, (3) lived with both original parents till at least fifteen years of age, and (4) had no record of organic involvement. The schizophrenics were evenly divided in terms of the reactive-process dimension. These two groups were compared with forty normal subjects. All three groups were matched for age, socioeconomic background, education, and vocabulary.

The Q-sort procedure was used to obtain descriptions of self, ideal self, mother, and father. Measures of parental identification

were then derived from these Q-sort descriptions. The Benjamin Proverbs was used to measure verbal abstracting ability.

The hypotheses were tested by subjecting the data to parametric analysis of variance for differences between the three groups, and t tests for differences between group pairs. Proverbs results were also subjected to covariance analysis in order to control for possible differences in abstracting ability due to differences in vocabulary.

No significant differences were found between the three groups on measures of maternal identification. Measures of paternal identification, however, showed significant differences between the three groups at better than the .01 level of confidence. Both reactive and process schizophrenics indicated significantly less paternal identification than did the normal control subjects. Item analysis of the Q sorts turned up a number of items that significantly differentiated between the groups in terms of descriptions of self, ideal self, mother, and father. Significant differences were also found between the three groups in verbal abstracting ability. Both schizophrenic groups showed significantly lower performance than did normal subjects. Process schizophrenics did poorest; reactives performed roughly midway between process patients and the normal subjects.

These findings were discussed in terms of their relation to relevant literature, particularly with respect to their implications for current knowledge and understanding of parental identification, personality development, and the family environment of the schizophrenic.

INTRODUCTION

Efforts to gain insight into the etiology of schizophrenia have taken many directions. In Europe the older constitutional orientation still holds sway as the explanatory approach par excellence to this disorder. In this country, in contrast, increasing attention has been focused on environmental and psychogenic determinants. Central to the environmental approach is the family of the schizophrenic. Over the last several decades, considerable evidence has accumulated from a variety of sources that familial factors are important in understanding the development of schizophrenia. Terms such as rejection, overprotection, domination, and ambivalence have been used frequently to describe the parents and families of these patients.

It is somewhat surprising, particularly in view of the significance repeatedly attributed to the early parent-child relationship by theorists, that a substantial body of empirical research on the subject of the family background of the schizophrenic has just recently begun to accumulate. Survey of this literature makes it evident that the mother of the schizophrenic has most often been the focus of attention, although the father has not been entirely neglected. Emphasis has been on typical character traits and kinds of behavior which such parents showed in their relationship with their pre-schizophrenic child. Despite much disagreement, the mother of the schizophrenic has been most frequently described

as domineering and aggressive, whereas the father has been described as passive and ineffectual. The fact that this modal parental hypothesis must be considered tentative however, can, at least in part, be attributed to the wide differences in sampling procedures and methods of data collection in individual investigations. Control groups are frequently not used, and even if used, there is often failure to match the control group with the patient sample. Consequent differences on variables such as social class and intelligence make the results suspect. Case history or interview has usually been the chosen source of data; analysis of these data has frequently been unsystematic and all too impressionistic in nature.

One paramount problem in this area of research has been the very complexity of the schizophrenic population itself. Sampling has varied so much as to render direct comparisons between studies prohibitive. In recent years, a promising approach to reducing the complexity of the schizophrenic population has been to view the disorder as including two polar types: at one extreme is the "process" schizophrenic who has an early and insidious onset of psychosis with absence of precipitating stress; at the opposite pole is the "reactive" schizophrenic whose case is typically characterized by abrupt onset usually attributable to a recognizable stress situation. Attempts to classify schizophrenic patients into these two categories, or to view the individual patient as occupying a position on a process-reactive continuum, have resulted in considerable success. It has been possible to demonstrate a number of

characteristics differentiating these two groups, differences formerly obscured by the practice of lumping all schizophrenics together as a presumably homogeneous group.

The present study has utilized the reactive-process dimension in order to investigate possible relationships between schizophrenia and parental identification. An exhaustive review of the literature relevant to parent-child relationships and family environment of the schizophrenic has disclosed no studies of parental identification per se. This is puzzling in view of the fact that this concept is frequently alluded to by theorists and investigators alike in explaining their findings or theorizing about their observations. It is hoped that this study will serve to fill some of this vacuum.

In carrying out the present study, it was assumed that the schizophrenic process is largely the result of environmental impact, and that the family is a central component of the schizophrenic's early environment. Moreover, it was assumed that the impact of the family is manifest in the identification process, and accordingly, measures of identification will demonstrate differences between schizophrenic patients and normals, as well as differences between reactive and process schizophrenics.

REVIEW OF THE LITERATURE

The Reactive-Process Syndromes

Repeated dissatisfaction with the old Kraepelinian classifications of schizophrenia has led to an active search for better means of reducing the heterogeneity of the schizophrenic population. One promising lead which has been the focus of much recent interest has been a two-dimensional frame of reference based on the differential prognostic rates of schizophrenic patients. Whether conceptualized as two ends of a continuum or as two opposing syndromes, the "process" schizophrenic can be characterized as one who fits traditional criteria, while the "reactive" schizophrenic corresponds more closely to the atypical or acute forms of this disorder. Becker (1956) has summarized the primary characteristics of these two syndromes:

The signs relating to poor prognosis, which for convenience have been termed the 'process' syndromes are (a) a shut-in, withdrawn, inadequate pre-psychotic personality, (b) slow, insidious development of psychosis, (c) relative absence of precipitating factors, and (d) presence of dull, rigid, inappropriate affect. The signs relating to good prognosis and termed the 'reactive' syndromes are (a) relatively normal pre-psychotic personality, (b) acute onset of psychosis, (c) presence of identifiable factors, and (d) presence of strong emotionality or tension (p. 36).

Reviews of the numerous prognostic studies which have culminated in the postulation of these two syndromes can be found in Kantor, Wallner, and Winder (1953), Garnezy and Rodnick (1959), and Herron (1962a). To date, a great number of studies have accumulated in which

this means of reducing the heterogeneity of schizophrenia has been successfully used. These studies have recently been reviewed in some detail by Herron (1962a) and Higgins (1964). As a consequence, no attempt will be made in the limited space available here to review these studies in any detail.

Relevant studies can be roughly grouped according to the method used to differentiate reactive and process schizophrenics. Most commonly used to this end have been rating scales (Phillips, 1953; Wittman, 1941), developed from known prognostic factors. Less frequently used has been the life history rating procedure or criteria developed by Kantor, Wallner, and Winder (1953). A few studies have made use of physiological criteria.

The earliest of the rating scales is the Elgin Prognostic Scale developed by Willman (1941) to predict response to electroshock. This scale consists of twenty subscales to be rated according to prognostic importance from case history materials. The subscales cover criteria related to prepsychotic personality, nature of onset, and type of symptoms. The Elgin Scale has been successfully used to separate reactive and process groups by Becker (1956), who modified and simplified the scale, King (1958), McDonough (1960), and Zlotowski and Bakan (1963). A second and more extensively used scale is the Phillips Scale (1953), which, like the Elgin Scale, was developed from case histories of patients who were eventually given shock therapy. On this scale, the patient is evaluated in three areas: pre-morbid history, possible

precipitating factors, and signs of the disorder. A number of studies, however, have established the adequacy of the premorbid history subscale when used alone to differentiate reactive and process schizophrenics. This subscale, for example, has been successfully used to reduce the variability in schizophrenic performance in a series of studies carried out at Duke University under the direction of Garnezy and Rodnick (1959). The premorbid history subscale is composed of a number of items covering the social aspects of sexual life during adolescence and immediately beyond, the social aspects of recent sexual life, personal relations, and recent premorbid adjustment in personal relations. Items are arranged in order of those most indicative of good prognosis to those most indicative of poor prognosis. Garnezy and Rodnick (1959) have pointed out some of the reasons for the extensive use of this subscale: The kinds of case history data needed to secure a valid scale rating are minimal. It has proved to be the best single predictor of remission as compared to the other subscales of the Phillips Scale. It can be rated with a high degree of reliability by different raters. Finally, it can be rated on the basis of patient interview materials, an advantage which helps overcome the all-too-frequent absence of adequate case history materials. Although the Elgin Scale and the Phillips Scale overlap considerably in terms of areas covered, the Phillips Scale is much easier and far less time consuming to rate.

A third method of distinguishing between the reactive and process groupings is a check list or life history rating procedure developed

by Kantor, Wallner, and Winder (1953) which establishes detailed criteria for rating patients along a developmental continuum. The list is subdivided into stages of development: birth to the fifth year, the fifth year to adolescence, adolescence to adulthood, adulthood. Under each developmental stage are detailed criteria for classifying patients into the reactive or process groups. This procedure has been used successfully in several studies (Brackbill & Fine, 1956; King, 1958; Reisman, 1960; Zimet & Fine, 1959), and has been expanded upon in a theoretical proposal regarding the reactive-process continuum authored by Kantor and Winder (1959).

One of the earliest papers pointing to a difference in psychological functioning between reactive and process schizophrenics was that of Kantor, Wallner, and Winder (1953), cited in the preceding paragraph. These authors were able to demonstrate that patients rated as psychotic from the Rorschach tended to be classed as process, whereas those classed as reactive tended to be rated non-psychotic. Becker (1956), using the Rorschach and Benjamin Proverbs, was able to show that process schizophrenics manifest more regressive, immature thinking than schizophrenics closer to the reactive pole. Several studies have investigated the possible relationship between organicity and process schizophrenia. Brackbill and Fine (1956), for example, found that process patients responded to the Rorschach in a way similar to that of organic patients. McDonough (1960), however, got results with the spiral aftereffect which showed no relationship between organics, reactives, and process

schizophrenics. Several studies by Meadow and others (1952, 1953a, 1953b) have explored the possibility of relationships between autonomic nervous system activity and schizophrenic behavior. The results of these studies led to the conclusion that the "mecholyt test" of autonomic reactivity is able to separate schizophrenics into two groups corresponding to the reactive and process syndromes. At one extreme was a group with poor prognosis, poor abstracting ability, disorganization of personality, and slight response to mecholyt. At the opposite extreme was a group with good prognosis, good abstracting ability, no disorganization, and marked response to mecholyt.

A series of studies using the Phillips Scale to differentiate between reactive (good premorbid) and process (poor premorbid) schizophrenics have been reviewed by Garnezy and Rodnick (1959). Although only the accumulative findings of these studies will be briefly discussed here because of the number of studies involved and the limited space available, it should be acknowledged that these studies have served to support the prognostic efficiency of the premorbid history subscale of the Phillips Scale as a means of reducing variability within the schizophrenic population. Initial studies dealt with the schizophrenics' responsiveness to tasks involving learning, perception, and language. Findings from these studies soon led to the conclusion that a relationship exists between social censure and behavioral deficit, a relationship which was most pronounced in process schizophrenics. Subsequent studies included social cues involving parental stimuli. Process

patients showed the most deficit when faced with maternal stimuli, whereas reactives showed the most deficit when faced with paternal stimuli. Direct study of the family organization of process and reactive schizophrenics by means of a structured information test soon added further insight into the origin of the schizophrenic's differential sensitivity. In the family of the process schizophrenic, the mother was found to be dominant and the father submissive, whereas in the family of the reactive patient, the father was the dominant member and the mother submissive. Normal families, in contrast, were characterized by shared parental authority. These studies appear to provide an experimental link between premorbid adequacy of schizophrenics, their prognosis, differential response deficit to social censure, and family organization. As Garnezy and Rodnick point out, it is easy to theoretically relate these findings to different patterns of early experience. Current theory regarding the identification process lends itself readily to the finding that the fathers of reactive patients tend to be assertive, possibly accounting for the greater social adequacy of their sons.

In summary, the many studies that have made use of the reactive-process dimension for reducing variability within the schizophrenic population have rather uniformly demonstrated the merit of this conceptual dimension. So far, a number of studies have successfully linked this dimension with a number of psychological variables, e.g., perception, cognition, learning, language, social experience, etc., all of which have served to add meaning to and better delineate the rather broad concept of "schizophrenia."

Schizophrenia and the Family

The hypothesis that schizophrenia has its etiological roots in the early developmental environment of the victim has received considerable support in recent years. Early theory focusing attention on the family is exemplified by Sullivan (1947) who held the belief that schizophrenia could be traced to early relationships with significant people in the environment. The phrase "schizophrenogenic mother," coined by Fromm-Reichman (1948), indicated the early emphasis on the mother. More recently, Rosen (1953) has written that the mother of the future schizophrenic suffers from a perversion of the maternal instinct.

Despite the many speculations regarding early environmental influences, it is only within the last decade or so that empirical research relevant to the question of environmental antecedents has begun to accumulate. Prior to 1950, few systematic studies can be found in the literature. One of the earliest was reported by Kasanin, Knight, and Sage (1934), who found a high frequency of maternal overprotection among schizophrenics and their mothers. Tietze (1949) interviewed mothers of patients and found them to be overanxious, perfectionistic, domineering, and restrictive toward their child. Hajdu-Gimes (1940) interviewed patients, who described their mothers as cold and aggressive, and their fathers as soft, indifferent, and passive. A study by Gerard and Siegel (1950) was one of the first to use a control group of normal subjects. They concluded from interviews with parents that the schizophrenic's mother is overprotective, dominant, and aggressive, whereas

the father is weak, passive, and inadequate, offering a poor model for masculine identification. A control group was also used by Prout and White (1950), who interviewed mothers of schizophrenics and normals and concluded that the mothers lacked being persons in their own right, causing them to live out their emptiness in the lives of their stand-in sons. Interesting is the assertion by these authors that their data did not demonstrate overprotectiveness or over-solicitousness as reported by Gerard and Siegel.

Reichard and Tillman (1950) analyzed case histories of schizophrenics and concluded that parents could be placed into three rather definite categories. Two categories involve the "schizophrenogenic mothers," who are domineering and aggressive women, married to ineffectual husbands. These mothers, however, are of two types: the overtly rejecting mother, who is cold, critical, and demanding, and a covertly rejecting mother, whose domination takes the form of overprotection. A final category involves the "schizophrenogenic father," who is overtly rejecting toward the patient, behaving toward the patient like a jealous sibling. The mother, on the other hand, tends to be the passive, ineffectual member of the pair. Linking these three categories together, according to the authors, is the child's failure to receive genuine love.

The above studies relied primarily on the interview technique as a means of collecting data. Focus was almost exclusively upon the mother-child relationship with only minimal attention being paid to the father. Data was sometimes from the parental point of view, e.g.,

Tietze's study, and sometimes from the patient's point of view, e.g., Hadju-Gimes' study.

One of the earliest studies of mothers, using objective techniques, was reported by Mark (1953), who administered a child-rearing attitude questionnaire to mothers of male schizophrenics and normal control mothers. The mothers of schizophrenics were found to have restrictive child-rearing attitudes and to give responses which expressed underlying ambivalent feelings toward their children. The Shoben Parent-Child Attitude Survey was used by Freeman and Grayson (1955) to study the mothers of schizophrenics. These authors found that the mothers showed attitudes of self-sacrificing martyrdom, subtle domination, and over-protectiveness. They expected unquestioning conformity with parental wishes, and they indicated marked over-concern with their children's sexual behavior. The Thematic Apperception Test was used by Singer (1954) to study patients' perceptions of parental relationships. As compared to a normal comparison group, patients introduced family figures into themes less frequently, saw both parental figures as less comforting and more "rebuking," and showed more ambivalence about goal attainment, as well as less awareness of the steps necessary for such attainment. In contrast to the positive findings of Mark, as well as those of Freeman and Grayson, regarding child-rearing attitudes of mothers of schizophrenics, Zuckerman, Oltean, and Monashkin (1958) found no differences between such mothers and normal control mothers using a child-rearing attitude inventory. No attempt was made to explain this

difference with other studies. A study reported by Dworin and Wyant (1957) was concerned with the question of authoritarian patterns in mothers of male schizophrenics. The measuring instrument was the F Scale (Fascism Scale), which was administered to patients, their mothers, and a control group of women similar to the mothers on relevant variables. Both patients and their mothers scored higher on this scale than did the control group. The mothers emphasized items expressing independence and assertion. A second part of this study involved observation of patients and their mothers in weekly therapy sessions. The mothers were found to stress conformity and foster dependence in their sons, maternal characteristics which tended to leave the sons helpless when on their own. Over-protectiveness made it impossible for the sons to meet later expectations for achievement, which, the authors concluded, ultimately led to the mother's rejection.

These studies using objective techniques have also focused on the mother-child relationship. The results have generally supported findings that have accrued from other sources. The mother-child relationship appears to differ in a number of ways from that of the normal subject and his mother. Such mothers are found to be restrictive, over-protective, and to demand conformity and foster dependence in their sons. Paradoxically, these same mothers appear to expect their sons to achieve independence and demonstrate assertiveness.

A study focusing on the patient's point of view was reported by Kohn and Clausen (1956), who made use of a systematic interview technique

to investigate parental relationships in matched samples of schizophrenics and normal subjects. The mother of the schizophrenic was found to play a more authoritarian role in the family than was true of the father. This was true at all socioeconomic levels for schizophrenics, whereas for normals it was true only at the lower socioeconomic levels. The mothers were described as strict, dominating and restrictive of the patients' freedom. The authors felt that their results were consistent with those of other investigators whose results pointed to the importance of a dominant mother in the family who fosters dependency in her child and hinders adequate male identification. Wahl (1956) extracted information relevant to family background from case histories of a large number of male schizophrenics. Wahl characterized the male schizophrenic as "a person who is often the youngest member of a large family, who had an unhappy and unloving relationship with one or both parents, and who may indeed have lost one of them during his childhood years, particularly the father, by death or other cause" (p. 208). Interesting was this author's finding that a rejecting father was the most frequently encountered pathological parental figure. These two studies are of particular significance because they not only include the father but point to him as playing more than just a passing role in the environmental background of the schizophrenic.

At least two papers have recently focused attention on the father of the schizophrenic. Lidz, Parker, and Cornelison (1956) have tentatively characterized five patterns of paternal personality:

(1) Fathers of schizophrenic daughters--constantly in battle with their wives who do not fulfill their rigid and distorted expectations, and struggling to gain the daughters to follow their patterns while sabotaging the wives as mothers; (2) fathers who cannot endure the rivalry of a son for the wives' attention and who impede the wives' efforts at mothering while derogating the sons; (3) passive fathers who are nonentities in the home, who do not fill their wives' ideals for a male, and furnish little in the way of acceptable patterns for their sons to follow.

Few of the fathers, according to the authors, have filled the paternal role usually expected in middle and upper-class families, and many exerted serious pathogenic influences upon the family structure and upon the rearing of the children.

Wolman (1961) has described four types of fathers from his experiences with schizophrenic patients in group psychotherapy. A first group of fathers are called "babies" by the patients. They are described as likeable and pleasant, but they fail to behave like fathers. A second group behave in their home like a spoiled "prodigy child," expecting all the attention in the world. A third group of fathers act like "rebellious boys," who fight against their wife but dare not leave her. A final group of fathers is comprised of those who do not care and do not participate in their family. They have little in common with their families. All of these fathers, according to Wolman, have in common failure in their social roles as husbands and fathers.

The few studies that have focused upon the personality of the father definitely support the contention that the father cannot be excluded from the family picture of the schizophrenic. Although there appears to be no paternal counterpart to the "schizophrenogenic mother,"

as proposed by Reichard and Tillman (1950), there is agreement that such fathers fail to carry out the paternal roles in their families and provide their children with poor models for identification.

A series of studies reported by Garnezy and Rodnick (1959) point to a relationship between the schizophrenic's premorbid adjustment or adequacy, as rated by the Phillips Scale, and his early parental environment. One of these studies (Garnezy, Stockner & Clarke, 1959) involved administration of a child rearing attitude scale to patients with instructions to answer according to how they believed their mothers and fathers would have answered while the patient was growing up. Poor premorbid patients attributed more deviant attitudes to both parents. Most interesting was the finding that while poor premorbid patients checked items indicative of maternal dominance in their family background, the good premorbid patients checked items indicative of paternal dominance. The often observed pattern of a dominant mother and ineffectual father was true only for the poor premorbid group, being reversed for the good premorbid group. Farina (1960) used a structured situational test to investigate some of the family patterns suggested by the Garnezy, Stockner, and Clarke report. Interest was focused on the social interactions of parents of schizophrenics and normals, with specific focus on patterns of dominance and conflict in the parents of the schizophrenics. Three groups of parents were used, one with poor premorbid sons, a second with good premorbid sons, and a third with normal sons. A number of hypothetical situations depicting either misbehavior of a son or a problem

situation involving parent and son were presented to each parent for solution and then to each set of parents. Objective indices were used to rate for dominance and conflict. Results indicated greater mother dominance among the poor premorbid parents and greater father dominance in the good premorbid families. Farina's findings are supported by more recent work reported by Garnezy and Rodnick. In one study, for example, requiring subjects to respond to minor variations in tachistoscopically presented materials, it was found that poor premorbid subjects showed greatest response deficit on mother-son scolding pictures, whereas good premorbids showed most response deficit on father-son scolding pictures. In another study, in which rewarding and punishing stimuli were used, it was found that poor premorbids showed maximum decline in preferences for female-censured photographs, whereas good premorbids showed greatest decline with male-censured photographs. These studies, demonstrating relationships between premorbid adequacy, differential sensitivity to censure, and familial patterns, appear to offer a promising experimental lead to a better understanding of the antecedents of schizophrenia. Moreover, such studies provide further insight into the parental interactions in the families of the schizophrenic and the relationships between these and the development of the disease process.

Current literature reflects a definite trend toward more direct study of the interactions of the schizophrenic and his family. Farina's study, discussed above, can be considered an example of this trend. The work being done by Lidz and associates at Yale University, the work being

carried out by the Schizophrenic Communication Research Project directed by Gregory Bateson, and that being done as part of the Family Study Project at the National Institute of Mental Health are all examples of this trend.

The Family Study Project is unique in that a number of families, each with a young schizophrenic sibling, have been selected to live in the hospital setting in order to facilitate study and treatment. Bowen, Dysinger, and Basamania (1959) have reported on their observations of the fathers in these families. Both Bowen (1960) and Brody (1959) have attempted to provide a means of conceptualizing these family interactions. Briefly, these authors describe considerable conflict between parents which serves to obscure deep interdependence between them. While the parents are unable to have a close relationship, each can have a close relationship with the patient, the mother usually being closest to the patient with the father excluded. The mothers express desire for their husbands to assert themselves, but become anxious and aggressive when the husbands do attempt to do so.

The results of a nine-year-old intensive study of structurally intact, upper-middle class families of young schizophrenics have been the subject of a series of papers by Lidz and associates (1957a, 1957b, 1958a, 1958b). These results have been recently summarized by Fleck (1960). Families taking part in this project have been interviewed on a weekly basis, and individual members of the families were administered a battery of psychological tests. The findings and conclusions to date

are extensive and can only be briefly discussed here. Parental personalities were found to vary widely, but in all families the parents were disturbed in one way or another. The investigators felt, however, that the personality disturbances were not nearly as relevant as the fact that each parent was paired with a mate who would either acquiesce to the other's irrational notions or constantly battle and undermine the other. The mother was not always dominant; frequently the father was dominant, irrational, and often paranoid. Parental interactions in many of the families were beset by chronic strife and controversy between the parents. In some families (skewed families) peace reigned, but only because compromise had been reached by one parent concerning serious personality defects of the other. This kind of family environment was maintained at the expense of the child, who was often involved in parental alliances. The skew, however, could involve both parents against the child. The families were found to foster irrationality in its members, and to seriously disturb the child's sense of identity by the absence of good identification models. In many of the families, the development of abilities to communicate outside the family were hampered, resulting in socio-cultural isolation, and perpetuation of irrationality.

An original approach to the interaction between members of a family with a schizophrenic member has developed out of communication theory and has centered around the concept of the "double-bind," first presented in a report by Bateson, Jackson, Haley, and Weakland (1956). The concept of "double-bind" was developed as a pattern of communication

provoking behavior in participants which was characteristic of schizophrenia. Initially, attention was focused on mother-child interactions, but later was extended to include three-party interactions, e.g., father-mother-child interactions. The double-bind situation can be stated briefly as follows:

1. When the individual is involved in an intense relationship; that is, a relationship in which he feels it is vitally important that he discriminate accurately what sort of message is being communicated so that he may respond appropriately.
2. And, the individual is caught in a situation in which the other person in the relationship is expressing two orders of message and one of these denies the other.
3. And, the individual is unable to comment on the messages being expressed to correct his discrimination of what order of message to respond to, i.e., he cannot make a metacommunicative statement (Weakland, 1960, p. 374-375).

This hypothesis proposes to explain the serious communication disorders of the schizophrenic which drive him to progressive isolation. Since the introduction of this theoretical concept, considerable literature relevant to it has accumulated. This has recently been reviewed by Watzlawick (1963), and has been the topic of a number of reports involving observations while in treatment of schizophrenics and their families (Haley, 1960; Jackson & Weakland, 1959; Weakland & Jackson, 1958).

Summarizing these studies, it is evident that concentration has shifted from efforts to characterize parental personality, particularly that of the mother, toward description of the parent-child relationship, to the study of the total family unit of the schizophrenic. Conceptualization has accordingly shifted from personality attributes and

parent-child terminology to tentative efforts to develop conceptual systems that take into account the interaction patterns within these families. The "double-bind" hypothesis exemplifies these efforts. Although still in the incipient stage, these efforts offer great promise. The earlier studies, emphasizing character traits and behavior of parents in relationship with their children, have been of great importance in demonstrating the degree of psychopathology which typifies these parents. Despite wide differences of opinion, the mother of the schizophrenic tends to be described as dominating her husband and children, while the father is generally described as submissive, and as failing to fill the culturally accepted role in the family. Differences found in this family pattern can be attributed to the wide variations in data collection methods, to whether the data is from the point of view of parents, the patients themselves, or that of an informer, and to differences in sampling procedures.

Samue (1960) has pointed to demonstrated differences in family patterns that can be attributed simply to neglect of important variables, e.g., social class, ethnic background, religion, age, sex, and diagnostic categories. It is only too evident after reviewing the literature in this area that differences due to these variables alone must be isolated if a better understanding of the schizophrenic process is ever to be achieved. It is evident that the label "schizophrenia" does not have reference to a homogeneous group of persons suffering from a common disorder with a common etiology. The relevant psychodynamics for males may

differ for females, that for acutes may differ from chronic patients, and that for upper-class patients likely differs in significant ways from lower-class patients.

Parental Identification

The concept of identification has come under increased scrutiny in the last few years as evidenced by the increase in theoretical papers on the subject and empirical studies in which identification is one of the major variables being investigated. This is only natural in view of the fact that this concept plays a central role in most theories of personality. The concept is central, for example, to the psychoanalytic explanation of how the child becomes socialized. It was Freud, in fact, who first elevated this concept to a position of explanatory importance in describing the nature and development of personality. According to Freud, identification is the process by which the individual reaches outside of himself and incorporates parts of the external world into his own personality, and in so doing, resolves frustrations, conflicts, and anxieties. By identifying with parents and other authority figures, for example, the child is said to learn morality and develop his basic character structure. Freud, however, used this concept in several different ways. In essence, he spoke of two kinds of identification. Primary identification was reserved for the organism's early, undifferentiated perceptions in which an external object (the outside world) is made part of the self. Secondary identification, in contrast, takes place at a later developmental date, after the child has achieved the ability to

discriminate between objects and things comprising the outside world and the private world of the self. The process of secondary identification is activated by the conflicts surrounding the oedipal situation. Out of fear of the same-sex parent, and in order to vicariously obtain the affection of the opposite-sex parent, the child identifies with the same-sex parent. The boy, for example, endeavors unconsciously to become his father.

Subsequent authors have attempted to expand upon Freud's basic idea. Sanford (1955) suggested that identification refers to a situation in which "an individual may be observed to respond to the behavior of other people or objects by initiating in fantasy or reality the same behavior himself....the individual strives to behave in a way that is exactly like that of the object" (p. 109). Identification is not a category of behavior, according to Sanford, but a "mechanism," and as such, it can be distinguished from introjection and other processes by which features of the environment are taken into the personality. It is a means of dealing with threat or crisis involving the self. It is unconscious, thus different from conscious imitation, and tends to be "identical," i.e., the subject strives to be exactly like the object. As a consequence, it is unrealistic, mechanical, or otherwise incongruous, and it is not a good source of internalized structures in the personality. The superego and other internal agencies are, accordingly, best accounted for by the process of introjection. From Sanford's position, what was called identification by Freud is actually introjection.

Sanford's conclusions are in contrast to those reached by Knight (1940), who contended that identification is not a "mechanism,"

but an accomplished fact which can result from several different mechanisms acting separately or together. In most cases, according to Knight, identification results from complex interaction between projection and introjection. It can be differentiated from introjection in that it is the result of an act in contradistinction to the act itself.

The views of Sanford and Knight express two divergent attitudes as to the meaning of the concept of identification. Explicit is the question of whether identification should be considered a process, a mechanism, or as the end result of a process or mechanism. Certainly this question has important implications for measurement. A number of studies (Bieri & Lobeck, 1959; Jourard, 1957; Mussen & Distler, 1959) have made use of an operational definition of this concept based on similarity in overt behavior between a subject and a model. Sanford argues that this may not be the best measure of identification, however, because presumably it leaves out the perceptual process. Isham (1956a, 1956b), in contrast, has stated that identification requires the presence of common traits between the individual and the object.

In addition to the authors already cited, several authors have discussed behavioral phenomena which were either labeled identification or labeled differently but nevertheless closely related to the concept of identification.

Miller and Dollard (1941) attempted to extend S-R theory to social behavior, using the concept of imitation as the cornerstone of social learning. According to these authors, an imitative act occurs

initially by chance and is repeated (i.e., reinforced) only if some drive is reduced following its execution. Reward from the social environment generally takes the form of praise or affection, and imitation of a person (a model) is thus strengthened by such rewards forthcoming from the environment. Another learning theorist, Mowrer (1950), attempted to translate the concept of identification into S-R terms. He distinguishes between two types of identification, developmental and defensive identification. It is through the former "that the infant learns to talk, to walk, and to perform other rudimentary ego functions." (p. 71) The good mother acquires "secondary reinforcement" value for her infant (sign learning); when at a later date the infant discovers that he too can do things the mother can do, these things have immediately satisfying qualities for him (solution learning). Developmental identification, in contrast, grows out of the crisis the child feels when parents begin to discipline him. The child is at first frustrated, but soon "learns that he can satisfy his parents and at the same time still his own inner turmoil if he will do one thing: accept the standards of conduct and social values which his parents are holding up to him and make them his standards, his values" (p. 72).

Relevant to this discussion is Anna Freud's (1937) concept of "identification with the aggressor." This concept refers to acquired behavior which is similar to or imitative of those of an aggressive or threatening model. This behavior is supposedly motivated by a need for anxiety reduction. This phenomenon, Mowrer's concept of "defensive

identification^m and Sanford's definition of identification, all relate back to Freud's original hypothesis that fear of the same-sex parent during the oedipal period motivates the child to identify with him. Reduction of anxiety, then, plays a central role in motivating identification in the eyes of these authors. Mowrer's "developmental identification"^m and Miller and Dollard's "copying" behavior, on the other hand, appear to be more positively motivated, i.e., motivated by direct social reward or to have self-rewarding value.

Highly relevant to the present study is an incisive attempt to analyze the concept of identification presented in a paper by Kagan (1958), who like Mowrer, Dollard and Miller, attempted to place the concept within a learning theory framework. Kagan defines identification "as an acquired, cognitive response within a person," the content of which "is that some of the attributes, motives, characteristics, and affective states of the model are part of the subject's psychological organization." Kagan spells out the motives and reinforcements involved in the acquisition and maintenance of an identification response in four assumptions: First, the subject perceives the model as having attributes and satisfactions (goal states) that he would like to possess. This wish or desire on the part of the subject next leads to the belief that if he were similar to the model, he would command these desired goals. Thus, the child wishes to be like the mother because the mother is perceived by the child as possessing attributes he would like to possess. The discrepancy between the child's perception of his inability to obtain

these desired goals and his perception of the more adequate adult elicits the wish to possess or control those goals which he perceives that model commands. The emphasis on perception should be noted here. Each time the subject perceives, or is told directly, that he is similar to the model, the identification response is reinforced. Thus, reinforcement can come about directly from the social environment, as in imitation learning, or as a result of the subject's perception of similarity with model. This latter means of reinforcement (perceived similarity) has self-rewarding characteristics and corresponds with Mowrer's thinking in reference to "developmental identification." As Kagan has pointed out, it is also evident in Freud's writings that he recognized the significance of perception. Freud spoke of identifications arising from perception of common qualities shared with other persons who are not necessarily objects of the sexual instinct. Significance here is in the thesis that a perception or fantasy is a reinforcement for the identification response.

Of particular relevance to this paper is Kagan's conclusion, in agreement with Sanford, that mere similarity in overt behavior between a subject and model may not be the most sensitive measure of degree of identification. This measure obviously overlooks the subject's perception of the model. Implicit in this statement is the idea that direct measurement of a subject's perception of a model may be one means of measuring identification of the subject with that model.

Parental Identification and Schizophrenia

Although one can find in a survey of the literature repeated reference to the identification process in schizophrenia, one finds no clear-cut descriptions of how one might expect this process to differ in schizophrenics from those falling into other categories of emotional disorder. What is usually found instead are comments to the effect that parental identification models have been faulty in some way. Scrutiny into this process usually ends here however. In this thorough review of the literature on schizophrenia, Bellak (1958) points out that:

.....anything that adds to confusion in a child's attempt to grasp reality...is likely to lead to an impairment in the testing of reality and the sense of reality...Inconsistent upbringing, alternating over-permissiveness with severely punitive outbursts, is likely to leave the child without any frame of reference with its behavior, or a clear concept of what is right and what is wrong...(moreover)...most dynamic learning is primarily dependent on good object relationships with subsequent internalization of these objects. If such good identification figures are not available because the significant figures are either narcissistic, extremely inconsistent internally, or vary, the learning necessary for reality testing, for a sense of reality, will be absent (p. 29).

Wahl (1956), in enumerating what he considered to be the antecedent conditions in the etiology of schizophrenia as indicated by his findings from an extensive review of case histories of schizophrenic patients in the Navy, suggested that such patients have experienced environmental conditions which "impede or prevent identification with strong adequate parental figures.... [thus resulting in]....impairment in self-regard and in the formation of concepts of personal adequacy." (p. 208) This author points out that the child is dependent upon others

for any sustained conception of himself, his worth, and his adequacy. This conception is obtained by an uncritical absorption of the prevailing attitudes held toward him by significant others in his environment, particularly the parents. Moreover, this identification or internalization without logical examination is essentially a magical process.

Without this 'magical helper,' which the good parent is, or should the parent be degrading or rejecting, the child is prematurely faced with his inadequacy and vulnerability and is hence forced by the painful pressure of strong fear and guilt to attempt their reduction by searching for external fear reducers or by having an increasing recourse to internal ones, such as fantasy...and social withdrawal (p. 208).

Lidz and associates (1957a, 1957b) have much the same thing to say. They point out that self identity does not come to the child as part of his biological development, out through learning interaction with the parental models, with whom he must identify. This process can proceed with reasonable smoothness only if these models are not impossible to follow, if they are not mutually contradictory, and if they have transmitted useful ways of living in society. The parents must provide the models of identification for children of both sexes. These can only be incorporated smoothly if the models are not conflicting and mutually exclusive. Each parent's worth as a primary love object depends not only upon that parent, but also upon the spouse's esteem for that parent.

Although the above excerpts in no way exhaust the many comments about the identification process in schizophrenia found in the literature, they do indicate the essence of current thinking in this regard. As for empirical studies of identification in schizophrenia, this author has

been totally unable to find any studies of this process. Yet the literature available concerning the familial environment of schizophrenics would certainly point to identification patterns markedly different from normals, and even differential patterns within the schizophrenic group itself.

Verbal Abstracting Ability in Schizophrenia:

Considerable interest has been focused on the thought disorder of the schizophrenic for a number of years. This interest, of course, has included language, which may be considered the externalized expression of thought. Bleuler (1950) made a number of observations in this area. More recently, Arieti (1955) and Rapaport (1946) have given theoretical consideration to this problem. Much of the research in this country over the last few decades has centered around concept formation or abstracting ability. Goldstein (1946) attributed to the schizophrenic a deficit in the abstract or categorical attitude. Early studies (Bolles, 1937; Bolles & Goldstein, 1938; Kasanin & Hanfmann, 1938) found strong evidence for this. Benjamin (1944) found that schizophrenics interpreted proverbs "literally" and concluded that they were impaired in ability to formulate abstract meanings.

Recently, emphasis has been placed on the development of more refined and reliable techniques to better delineate the boundaries of this impairment. Feldman and Brasgow (1951), for example, used a refined sorting technique (the Visual-Verbal test) and concluded from their findings that impairment is due primarily to the schizophrenic's inability to formulate abstract concepts, rather than inability to shift from one concept

to another. Zaslav (1950) found significant differences between schizophrenics and normals along several dimensions of conceptual thinking (i.e., fluidity, rigidity), using a variation of the sorting principle. Both Jacobs (1954) and Chapman (1956) were able to demonstrate that the schizophrenic has difficulty "changing set" and concluded that this is an important aspect of his conceptual performance. Chapman's data included a distractability aspect, i.e., the schizophrenic was found to be more distractable when faced with inappropriate stimuli than was the normal.

Impairment of abstracting ability in schizophrenia as related to the content of the stimuli presented was explored by Lewis et al. (1959). These authors hypothesized that patients would have more difficulty abstracting oral material than they would anal or phallic material. Proverbs were categorized by judges on the basis of latent content into oral, anal, and phallic groups. These were then administered to matched groups of thirty schizophrenics and normals. As confirmed by previous studies, the schizophrenic group did significantly poorer on the proverbs. Content analysis, however, revealed that the differences were most pronounced for the oral material, somewhat less for the anal, and least for the phallic. The control group showed no differences in regard to content. The authors interpreted this as indicating that the schizophrenics show greater difficulty when attempting to deal with material from earlier developmental experiences.

Gorham (1956a) reported both clinical and multiple-choice forms of a proverbs test including scoring procedures and norms for normals

and schizophrenics. He was able to demonstrate (1956b) that either form of the test could differentiate with a high degree of statistical significance between a normal and a chronic schizophrenic population matched for age, class, and intelligence. The multiple-choice method, however, was found least effective when used with chronic paranoid schizophrenics, especially those in the high intelligence range. In a later study (Elmore & Gorham, 1957), it was demonstrated that the multiple-choice form of the test could differentiate between normals, chronic schizophrenics, and organics.

Several papers cited in an earlier section of this study (Meadow et al., 1952, 1953a, 1953b) have dealt with the relationship between abstracting ability and activity of the autonomic nervous system. On the basis of physiological test of autonomic activity or responsiveness and psychological test of abstracting ability (including the Benjamin Proverbs), it was possible to separate schizophrenics into types corresponding to the reactive and process syndromes. Of the psychological tests used, only the Benjamin Proverbs distinguished significantly between the types delineated. Patients with poor prognosis and slight response to mecholyl were found to do poorly on the Benjamin Proverbs. Patients with good prognosis and marked response to mecholyl were found to do well on the Benjamin Proverbs.

The possibility that concreteness may characterize only one group or category of schizophrenics, as suggested by the Meadow et al. studies, has received some additional support. Becker (1956), for example,

evaluated the thinking processes of schizophrenics by means of the Rorschach and Benjamin Proverbs test, and related these findings to ratings on the Elgin Prognostic Scale. Becker, however, chose to treat the reactive-process dimension as end points on a continuum of levels of personality organization rather than as two distinct syndromes. A scoring system was devised for the proverbs which would reflect levels of abstracting ability ranging from highly abstract to absurd in quality. A final score was arrived at for each subject by using a discrepancy score based on the standard score difference between vocabulary, used by Becker as an expedient to intelligence testing, and the proverbs score. The proverbs score, with vocabulary partialled out, was found to be significantly related to the reactive-process dimension for men, but not for women. Schizophrenics at the process end of the Elgin scale do significantly poorer in interpreting proverbs than do patients at the reactive end of this continuum. The author was unable to offer an adequate explanation for the sex difference found.

More recently, Herron (1962b) investigated the relationship between the degree of impairment in abstract ability and the reactive-process classification of schizophrenia. Five measures of abstracting ability were used (Gorham's Proverbs Test, the Kahn Test of Symbol Arrangement, the Similarities and Block Design subtest of the Wechsler Adult Intelligence Scale, and a modification of the Category Test), plus the vocabulary of the Wechsler Adult Intelligence Scale, which was used to control for intelligence. The patients were separated into reactive and process

groupings by means of the Barron Ego-Strength Scale (ES), and by two psychiatrists who rated independently each patient on the basis of prognosis. Herron's results support the contention of a significant difference between reactive and process groupings in ability to abstract, the latter group showing the greater impairment. Although impairment was evident in the reactive group, according to Herron, especially on similarities and proverbs test, it was the process group that consistently showed an inability to abstract. "It would seem that there are two polar constellations of schizophrenia: a process type characterized by poor prognosis and gross impairment of abstract ability, and a reactive type characterized by good prognosis and slight impairment of abstract ability" (Herron, 1962, p. 153).

All of the studies cited in this brief discussion indicate impairment of abstracting ability in schizophrenia. Only two studies, however, point to differential impairment with the schizophrenic group itself. The studies by Meadow and associates demonstrated a relationship between mecholy1 and abstracting ability, results which they felt corresponded to the reactive-process dimension of schizophrenia. No control groups were used in these studies, however. Herron differentiated patients into reactive and process groups by means of the Barron Ego-Strength Scale and psychiatric ratings, and compared their performance on tests of abstracting ability with those of normals. As he hypothesized, reactives performed much like normal subjects on these tests, showing only slight impairment in ability to abstract as compared to process schizophrenics.

No studies on abstracting ability have been carried out using the more standard scales for differentiating process and reactive schizophrenics. It was for this reason that the Benjamin Proverbs were included in the present study.

THE QUESTION AT ISSUE

The present study followed a promising procedure in reducing variability within the schizophrenic population. Two samples of schizophrenic subjects were selected, one corresponding to the "reactive" syndrome, and the other to the "process" syndrome. The grouping of schizophrenic patients was accomplished by means of the Phillips Scale. Although for the present study, this dimension was treated as a dichotomy, it was recognized that it is better thought of as a continuum running through the schizophrenic population. The two schizophrenic groupings were matched on relevant control variables (socioeconomic class, education, age, etc.) insofar as possible, and then matched with a selected group of normals. The primary purpose of this study was to investigate the proposition that significant differences exist between these three groups in direction and extent of parental identification. A subordinate purpose was to investigate the question of whether differences exist between these three groups in subjective descriptions of self and parents and in verbal abstracting ability. The Q-sort procedure was used to provide measures of parental identification and subjective descriptions of parents. The Benjamin Proverbs was used to provide a measure of verbal abstracting ability.

The question at issue can be stated thus: are there significantly divergent relationships between schizophrenics and normals in terms of parental identification patterns? Observation, theory, and a number of

empirical studies certainly lead one to expect to find such differences. But, there is much controversy reflected in the literature in regard to relationships between schizophrenia and variables relevant to parental environment backgrounds. Empirical studies have not cleared up this issue. Furthermore, to the author's knowledge, there are no studies of identification patterns in schizophrenic patients, although this is a common topic in relevant discussions.

HYPOTHESES

1. It was hypothesized that significant differences exist between the three groups to be studied in regard to the degree of self-parental (mother; father) identification. This hypothesis was tested by statistically determining whether significant differences existed between the groups studied in terms of the central tendency measures of the distribution scores for each group.

2. It was hypothesized that significant differences exist between the three groups to be studied in regard to the degree of ideal self-parental identification. This hypothesis was tested in the same manner as hypothesis #1.

3. It was hypothesized that significant differences exist between the groups to be studied in regard to the degree of discrepancy between mother identification and father identification. This hypothesis applied to both self-parental identification and ideal self-parental identification. It was tested by statistically determining whether significant differences existed between the groups studied in terms of central tendency measures of the distributions for each group of discrepancy scores between the mother identification score and father identification score. Four such discrepancy scores were derived:

- (a) This measure was based on the magnitude of the difference between the mother identification and the father identification score.
- (b) This measure was based on the magnitude of the difference between the ideal-mother identification score and the ideal-father identification score.
- (c) This measure was based on the sign (plus or minus) of the difference between mother and father identification scores, i.e., if the paternal score was greater, a plus was assigned, but if the maternal score was greater, a negative sign was given.

- (d) This measure was the same as (c) on previous page except that it was based on the sign of the difference between ideal-mother and ideal-father identification scores.

4. It was hypothesized that differences exist between the groups studied in terms of perceived personality characteristics attributed to parental figures, self, and ideal self. These differences were measured by means of item analysis of the Q-sorts made by each group. The central tendency of item placement for each item for each group were compared with the central tendency for each of the other groups for that same item. Items found to significantly differentiate between groups were used to characterize group differences.

5. It was hypothesized that differences exist between the groups studied in terms of degree of self-acceptance. The measure of self-acceptance was the degree of correspondence (correlation) between self-sort and ideal self-sort. This hypothesis was tested by statistically determining whether significant differences existed between the groups studied in terms of central tendency measures of the distributions for each group in regard to self-acceptance scores.

6. It was hypothesized that significant differences exist between the three groups to be investigated in regard to verbal abstracting ability. It was predicted that on a test of verbal abstracting ability, normals would demonstrate no impairment, process schizophrenics would demonstrate considerable impairment, and reactives would demonstrate mild impairment, thus placing them between normals and process schizophrenics. Stated differently, normal subjects would score highest, followed in order by reactive schizophrenics, and process schizophrenics.

METHOD AND PROCEDURE

Specification of the Sample

Subjects for this study consisted of forty normal subjects, forty reactive schizophrenic subjects, and forty process schizophrenic subjects. All of the schizophrenic subjects were newly admitted patients at the Stockton State Hospital, Stockton, California, and all carried an official psychiatric staff diagnosis of schizophrenia. The frequency of specific diagnostic labels of the reactive-process samples can be found in Table 1. An effort was made to see the records of all newly admitted patients so that those patients who did not fit the following criteria could be immediately eliminated: (1) lack of evidence of organic brain damage, (2) reared by both original parents to at least fifteen years of age, and (3) between nineteen and fifty years of age. Patients below nineteen years of age were eliminated because it was found empirically that the Phillips Scale, used to establish the reactive-process groups, was of questionable validity below this age. The upper limit was set somewhat arbitrarily, but as it turned out, very few patients were found beyond this age limit who fit the study in other respects. Once a patient had passed the initial criteria, he was then interviewed by the author or an assistant to determine whether he was adequately integrated to carry out the experimental procedures. If he was found to be too ill, testing was postponed to a later time. If the patient had undergone or was undergoing electro-shock, he was not tested until at least one month

had elapsed from the final treatment. The Phillips Prognostic Rating

TABLE 1
Frequency of Diagnostic Labels of the
Two Schizophrenic Samples

Diagnosis	Frequency	
	Reactive	Process
Schizo-affective	6	3
Paranoid	17	15
Catatonic	0	1
Acute Undifferentiated	13	4
Chronic Undifferentiated	4	17

Scale (Phillips, 1953) was used to place schizophrenic subjects into the good premorbid (reactive) and the poor premorbid (process) groups. A cut off score of twenty or above was used to select the poor premorbid group, while a score of ten and below was used to select the good premorbid group. See Table 2 for the distribution of Phillips scores .

Normal subjects were procured from (1) Army reserve personnel during a summer encampment, (2) hospital psychiatric technicians, (3) hospital maintenance employees, and (4) local union organizations. Subjects were included in the normal group only if they had no history of emotional difficulties necessitating hospitalization or outpatient-type treatment, and were reared by both original parents until at least fifteen years of age. All normal subjects were interviewed and tested either at Stockton State Hospital, or, in the case of the Army personnel,

at the summer camp headquarters. An effort was made to select normal subjects who matched the schizophrenic subjects on the variables of age, socioeconomic background, educational level, and vocabulary. The two schizophrenic groups were similar on all of the control variables; nevertheless, difficulty was encountered in finding normal subjects who matched the two schizophrenic groups on the variables of education and vocabulary. It soon became evident that attempting to balance the groups on these variables involved working at cross-purposes. Approximately fifty per cent of the schizophrenic subjects had not graduated from high school, and it was difficult to locate and gain the cooperation of normal subjects of equal educational background. Even when this was accomplished, it was found that normal subjects who had not graduated from high school tended to come from a much lower socioeconomic background and to have a higher vocabulary level. One explanation of this dilemma was rather obvious. Vocabulary level and educational level are influenced (lowered) by schizophrenic involvement while socioeconomic background is not. Despite these difficulties, however, there were no significant differences between the three groups on any of the control variables. See Table 3.

Subjects were eliminated from the study finally if they failed to achieve what was considered a reasonable level of reliability on the experimental procedures. This reliability was determined by having each subject describe himself twice with the Q-deck. The correlation between the two sorts then provided a reliability coefficient. Those scoring

below .70 were eliminated from the study.

Tests Used

1. The Phillips Prognostic Rating Scale. This scale (Phillips, 1953) has been used widely to discriminate between prognostically favorable and prognostically unfavorable schizophrenics. The scale was developed from case history materials of schizophrenic patients to predict response to shock treatment. Although the scale was designed to evaluate each patient in three areas--premorbid history, precipitating factors, and signs of the disorder--only the first part of the scale, premorbid history, was used in the present study.

In order to determine the reliability of the full scale, the first thirty schizophrenic patients seen for the present study were rated on the full scale by the author and a second rater. A reliability coefficient was computed for the full scale and separately for all three subscales. The reliability coefficient for the full Phillips Scale was .86. The reliability coefficient for the Pre-morbid History subscale alone was .90. That for the Precipitating Factors subscale alone was .70; that for the four Signs of the Disorder subscale alone was .43. It is evident that the Pre-morbid History scale was found to be more reliable than the other two scales; moreover, it could be rated more reliably than could the total Phillips Scale. It was for this reason that only the Pre-morbid History subscale was used in this study to place patients into the reactive and process groupings. All of the remaining ratings were done by the author alone.

TABLE 2

Frequency of Scores for the Premorbid
History Subscale of the Phillips Scale

Reactive										Process										
9										X										
8										X	X									
7										X	X									
6					X	X				X	X	X			X					
5	X				X	X				X	X	X			X					
4	X	X			X	X				X	X	X	X		X					X
3	X	X			X	X	X			X	X	X	X	X	X	X				X
2	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X				X
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2	3	4	5	6	7	8	9	10	20	21	22	23	24	25	26	27	28		

Phillips Score

TABLE 3

Means, Standard Deviations, and
F Ratios for Control Variables

Measures		Means				S. D.	
		N	R	P	N	R	P
Vocabulary	1.1 (N. S.)	41.5	39.6	36.9	11.0	15.2	14.6
Social Class	.2 (N. S.)	6.0	5.8	5.7	1.9	2.2	2.0
Age	1.3 (N. S.)	28.9	31.8	30.2	7.0	8.4	7.6
Education	.4 (N. S.)	11.8	11.8	12.1	1.6	2.0	2.2

The decision to use the Premorbid History subscale alone is not unique to the present study. In fact, the practice is widespread in the literature and is in agreement with Phillips' own findings that this scale is the best predictor of remission. Garnezy and Rodnick (1959) cite additional reasons for using the premorbid subscale alone: (1) the case history data needed to arrive at a valid scale rating is minimal; (2) data available in the case history for rating the other two subscales is frequently inadequate; and (3) "several reliability studies indicate a high correlation ($r = + .80$ and higher) for the premorbid scale ratings of experienced clinical faculty members and less sophisticated graduate students who have been trained in the use of the scale" (p. 454).

In order to rate patients on the Phillips Scale, both case history and personal interview materials were utilized. This practice is also consistent with the use of the scale made by others as reflected in the psychological literature. In relation to this use of personal interviews, Garnezy and Rodnick (1959) have the following to state:

Of even greater importance are the recent findings that ratings secured from patient informants result in assignments to premorbid categories which are virtually identical with those based upon case history data. In one study in which information obtained from patients was compared with data available from the case record, it was found that the assignment to the same premorbid category occurred in 43 of the 46 cases. Thus, in the absence of an adequate case history, the patient can be used as a respondent to secure data necessary for assignment to an appropriate premorbid category (p. 454).

The items making up the subscale are arranged in order of importance for improvement or nonimprovement, and range from 0 through 6, reflecting increasingly poor prognosis. The subscale is divided into six

parts: (1) recent sexual adjustment, (2) social aspects of sexual life during adolescence and immediately beyond, (3) social aspects of recent sexual life 30 years of age and above, (4) social aspects of recent sexual life below 30 years of age, (5) personal relations history, and (6) recent premorbid adjustment in personal relations. See Appendix 1.

2. The Q-sort Procedure. In recent years the Q-sort method of scaling qualitative descriptions has won wide acceptance as a means of quantifying subjective impressions and rendering them amenable to statistical manipulation. Originally devised by Stephenson (1953) to provide data for his studies in Q or obverse factor analysis, the Q-sort technique has developed quite independently of this origin. Put simply, the Q technique is a way of scaling and standardizing self-report data so that it can be subjected to rigorous inter- and intra-person analysis.

The Q-sort procedure is as follows: A number of statements, phrases, or descriptive adjectives comprising a sample from a defined universe are selected and then printed individually on cards. The pack of statements is then handed to the subject, and he is told to sort them into a predetermined number of piles according to some particular criterion, e.g., describe your father. The subject is also instructed as to how many statements must go into each pile, e.g., one in each end pile, two in the next, and so on. As a result of this procedure, the subject has been forced to arrange the statements or adjectives into a symmetrical distribution, along a continuum from most applicable to least applicable.

This procedure has been most commonly used as a measure of one's

image of himself (self sort) or of his ideal-self image (ideal sort). But not only can a person sort according to his own self-picture, he can also sort the sample statements or adjectives according to his image or perception of another person. The present study made use of both of these procedures.

Construction of the Q-sort Deck: In the present study, the universe investigated and measured by means of the Q-sort procedure was that of personality. From a theoretical point of view, the items making up the deck used should be the result of random selection from this universe. But from a practical point of view, this could only be approximated. There is no agreed upon set of rules to facilitate the development of an item set for a particular purpose. Nevertheless, general suggestions for the construction of a Q-sort can be found in the literature, e.g., Block (1961), Cronbach (1953), and Stephenson (1953). What was needed for the present study was a set of items which could be readily sorted by mental patients, as well as by normal subjects, who (1) in some cases would be or below average intelligence and verbal ability, and (2) who in some cases would possess less than a high school education. Another crucial requirement was that the final selection of items lend itself to both self description and description of others.

Initially, it was hoped that an already established deck of items suitable for the present study could be found. Block's (1961) adjective Q-set seemed at first to fill this need. This optimism soon proved wrong. Many of the items were too difficult for the average patient; some items

were ambiguous as to meaning; others could be used to describe only the self. It was then decided to construct a new Q-sort using Block's original list of items as a starting place. Approximately fifty male patients, roughly representing a random sample of hospitalized schizophrenic patients, were individually presented the items of the Block set and asked to describe their meaning. In this way, the troublesome items were located and eliminated from the list. An effort was then made to replace unsuitable items with items as close as possible in meaning. In some cases, this could be accomplished with synonyms. In the event that a suitable synonym could not be found, a short phrase was introduced to replace the original item if the meaning was considered worth retaining. A few original items were eliminated without effort to approximate them because they were considered irrelevant or as contributing little to the total list.

The items and phrases finally selected for inclusion were procured from a number of different sources, e.g., suggestions by others, dictionaries, other item lists, etc. Most helpful was Allport and Odbert's (1936) list of trait names.

Since the "universe" to be measured by the items was "personality," an effort was made in selecting new items to measure or tap as many dimensions of personality as possible. In order to accomplish this, it was necessary to select items that were reasonably free from correlation with other items. Pains were taken not to use items with similar or overlapping meanings. In a few cases, particular items were not selected because it was felt a particular meaning was covered adequately by a combination of

several items already in the list.

The end result of the procedure outlined was a seventy item Q-sort consisting of adjectives and short phrases to be sorted out into seven categories with ten cards in each category. Each item was typed onto one side of a three by five card, and the number of the item was typed on the reverse side for recording purposes. See Appendix 2.

The following Q-sorts were required of each subject participating in this study:

1. Self Sort. The subject was instructed to sort the Q items so as to describe himself as he sees himself. Items were sorted from those most characteristic of the self to those least characteristic of the self. This sort was repeated twice so as to provide a reliability check.
2. Ideal-self Sort. The subject was instructed to describe himself as he would like to be, i.e., his ideal self. Items were sorted along the continuum from most desirable to least desirable.
3. Father Sort. The subject was instructed to sort the Q set so as to describe his father as he honestly sees him. Items were sorted along a continuum from most to least characteristic.
4. Mother Sort. The subject was instructed to sort the Q set so as to describe his mother as he honestly sees her. Items were sorted along a continuum from most to least characteristic.

An Operational Definition of Identification

In the present study, identification was measured in two separate ways, and accordingly, operationally defined in terms of these measures. Both measures were derived from the patient's perception of the model in question, and thus, partially avoided the criticism that measurement of

mere similarity in overt behavior between a subject and a model may not be the best measure of identification. It was assumed in this study that a subject's perceived similarity between himself and a model (mother, father) is a more meaningful measure of identification than a measure based on overt similarity between that subject and a model. This assumption is implicitly supported by several papers referred to in an earlier section, and, in addition, is consistent with phenomenological theory in that a subject can identify with a model only as he perceives that model, whether consciously or unconsciously.

One of the two measures of identification used in this study was based on the correspondence (correlation) between each subject's self sort and his parent sorts. Thus, mother identification was measured by the degree of correspondence between self sort and mother sort; father identification was measured by the correspondence between self sort and father sort. This measure, while based on perception of the model, would seem to relate most closely to the view that identification is a result or accomplished fact, as Knight (1940) contends. Emphasized is perceived similarity with the model.

A second measure of identification, in contrast, emphasized a ~~striving-to-imitate-the-model~~ aspect of identification. This second measure would appear to be more closely related to the argument that identification is a process rather than a result. It was based on the correspondence between ideal-self sort and parent sorts. Thus, ideal-father identification was measured by correspondence between ideal-self

sort and father sort; ideal-mother identification was measured by correspondence between ideal-self sort and mother sort. This measure would appear to go beyond the subject's perceived similarity with the model and measure the extent to which the subject is striving toward (or away from) the model, and the degree to which the model is valued as an object to be identified with.

3. The WAIS Vocabulary Subtest. The vocabulary subtest was used as an expedient for intelligence testing since considerable evidence indicates that vocabulary is the best single index of general intelligence and that it tends to hold up well in the face of psychopathology. Scoring was according to standard Wechsler procedure, and was done by the author.

4. The Centers' Occupational Index. The Centers' Occupational Index (1949) is a simple scale consisting of nine categories reflecting occupational level. These range from common labor, carrying a scale score of 9, to owner or manager of a large business, carrying a scale score of 1. Each subject participating in the study was rated as to his father's occupation. This was assumed to be a rough measure of socioeconomic background. Father's occupational level was considered to be a more meaningful indicator of socioeconomic background than using the patient's occupation directly because many schizophrenics, particularly those falling into the process group, are poor achievers socially and occupationally despite their socioeconomic opportunities. Centers' Occupational Index is included as Appendix 3. Scoring was accomplished

by assigning to each subject the number corresponding to the occupational category or level of the father as indicated on the scale. This was accomplished by the author.

5. The Benjamin Proverbs. These proverbs were used as a measure of verbal abstracting ability. See Appendix 4. Benjamin (1944), however, never developed a formal system of scoring, so a system recently developed by Becker (1955) was used. This system provides a weighted score for each proverb ranging from a score of six for highly abstract responses to zero for no response. Abstract responses are scored 4, 5, or 6 depending upon the quality of the response. A score of 3 is given to vague responses, and a score of 2 is given to literal responses. Becker recommends that a weighted score be assigned to failures to respond based on a prorated score derived from the total number of proverbs interpreted. The present author did not consider this suggestion defensible, however, since a good quality response to one proverb and failure on all others would nevertheless result in a relatively good final score. In view of this, it was decided to provide each subject with two proverb scores. The first score was based on Becker's system excluding the prorated score. Thus, a literal response received a score of 2, an absurd response a score of 1, and a failure to respond score of 0. The second score was derived by giving literal, absurd, and zero responses all a weighted score of 2, thus putting these three categories on equal footing. This, it was felt, would have the effect of not crediting subjects for absurd responses, or failure to respond, and of not penalizing

subjects for refusing to respond when they did not know what the proverb meant.

The proverbs were scored, after all data for the study had been collected, by the author and two members of the psychology staff (both Ph.D.'s) at Stockton State Hospital. Scoring was done independently by each rater without reference to names or status on the Phillips Scale. Inter-rater correlations for the three groups combined were as follows: .92, .90, .89; .95, .94, .93.

Experimental Procedure

All subjects were interviewed and tested in a private office, and all were seen individually by the author or a graduate student assistant. The total procedure required roughly three hours of time and was usually carried out in two separate sessions. Subjects were first interviewed in order to (1) establish rapport, (2) determine whether the subject was intellectually and emotionally able to cope with the procedure and would cooperate, and (3) provide data for the rating of the Phillips Scale. If a patient was found to be uncooperative or too ill, he was seen again at a later time. This was usually just prior to the patient's release from the hospital.

A quick check of reading ability and word knowledge was accomplished by simply asking the subject to read out loud and explain briefly the meaning of a sample of the items in the Q-sort deck. If it were evident that a patient was not going to score twenty or above, ten or below points on the Phillips Scale, the interview was terminated.

Each patient was informed during the course of the initial interview that he was being seen by a psychologist as a part of the total evaluation procedure in the hospital. This explanation was generally accepted without question. An alternative of informing the patient that he was taking part in a research project was soon abandoned when it was discovered that this all too frequently provided the patient with a reason to be uncooperative.

An open-ended, unstructured interview approach was used in procuring information for the Phillips Scale.

The vocabulary subtest was administered next in accordance with standard WAIS procedure.

The administration of the Q-sorts was generally divided into two sessions because of the time involved, and the order of presentation was counterbalanced. Instructions were by necessity highly individualized, but each subject was encouraged to take his time and be as honest and accurate as possible. It was stressed that this was not a test, and if there were any questions as to the meaning of particular items, this was to be brought to the attention of the examiner. When questions arose, the meaning of the items in question were briefly discussed with the patient.

To facilitate the final breakdown of the seventy items into seven categories of ten items each, ranging from most descriptive to least descriptive, subjects were instructed to first divide or sort the cards into three groups. The first group was to include items considered

most descriptive, the last group items considered least descriptive, and the middle group those items that were considered to be in between, in the middle, or neutral. The items were then further subdivided into the needed seven categories beginning with the first group, followed by the last group, and finally the middle group. The item placements were recorded by the examiner on a data sheet designed for this purpose. All sorts were done in exactly the same manner and differed only in the initial instruction; e.g., "describe yourself," "describe the way you would like to be," "describe your father," "describe your mother." As for the second self sort, the subject was simply instructed to sort the cards so as to describe himself a second time.

The procedure was completed with the administration of the Benjamin Proverbs. The subject was informed that several sayings or proverbs would be read to him one at a time and that he was to interpret them, i.e., to explain what they mean. Several examples were presented and explained to insure that the subject understood what was expected of him. Responses to the proverbs were recorded verbatim insofar as possible by the examiner. It was recognized by the author that there may be reasonable question of possible contamination of results from the ratings of the Phillips Scale to the recording and scoring of the Benjamin Proverbs, because of the fact that the proverbs followed the Phillips and were administered in many cases by the same examiner. It was felt by the author, however, that this possibility was minimized, if not eliminated entirely, by the practice of administering the Phillips Scale at the beginning of

the procedure and the proverbs at the end of the procedure, by verbatim recording of the proverbs, and by the fact that the proverbs were scored at a much later time by three separate raters.

RESULTS

The central purpose of the present study was to investigate possible differences between normal subjects, reactive schizophrenics, and process schizophrenics on measures of parental identification. The first two hypotheses of this study stated that differences will be found between these groups on measures of (1) mother identification, (2) father identification, (3) ideal-mother identification, and (4) ideal-father identification. The F ratios resulting from an analysis of variance of each of these measures are to be found in Table 4.¹ Since no directional differences were predicted, two-tail tests were used to establish confidence limits.

The F ratios for measures of mother identification and ideal

1. In addition to analysis of variance of raw scores for measures of parental identification, parental identification discrepancy, ideal-self, and self-self, these scores were also subjected to Fisher z transformation and nonparametric Kruskal-Wallis one-way analysis of variance. Fisher z transformation was felt to be worth doing because of the highly positively skewed nature of the correlation scores. Nonparametric analysis was felt to be worth doing because of possible question of whether the raw data met parametric assumptions. These procedures, however, were found to make very little difference in the final analysis. These findings are in accord with those of several investigators (e.g., Boneau, 1960) that the F and t tests are extremely "robust" under a number of conditions supposedly violating assumptions underlying these tests. According to Boneau, the probability statements of parametrics are accurate to a high degree despite violation of homogeneity of variance and normality. This is particularly true when (1) sample sizes are equal, and (2) underlying distributions are approximately the same shape. The raw scores of this study met these conditions.

mother identification failed to reach the .05 level of significance, indicating that no significant differences were found between the three groups on these measures. Both measures of father identification, in contrast, resulted in highly significant F ratios, indicating highly significant differences between the three groups on these measures. Fisher t tests, run between paired groups, demonstrated that, for both the father and ideal-father identification measures, differences between the two schizophrenic groups were insignificant, but both of these groups differed significantly from the normal group. Fisher t's, means, and standard deviations are to be found in Tables 5 and 6 respectively. The normal group demonstrated significantly greater identification with father than either of the two schizophrenic groups.

Hypothesis 3 stated that differences will be found between the three groups on several measures of parental identification differences. These measures will be referred to as (a), (b), (c), and (d), corresponding to their definition. Measures (a) and (b) were based on the magnitude or extent of the differences between parental identification scores. Measures (c) and (d) were based solely on the direction of the differences between parental identification scores. Only the two measures (a) and (b) reached significance. The F ratios resulting from analysis of variance of these two measures are to be found in Table 7. It is evident that the three groups differed to a highly significant degree in regard to the magnitude or extent of difference between mother and father identification, and between ideal-mother and ideal-father identification.

Fisher t's, means, and standard deviations are to be found in Tables 8 and 9 respectively. For both measures (a) and (b), the schizophrenic groups showed no significant differences, but both differed significantly from the normal group. There was a greater difference between mother-father identification, and ideal-mother--ideal-father identification, for both of the two schizophrenic groups than was true of the normal group. In other words, there was greater agreement between mother-father and ideal-mother--ideal-father identification measures (i.e., they were closer together) for normals than for either of the schizophrenic groups.

Measures (c) and (d) were based solely on the direction of the difference between parental and ideal-parental identification scores. A chi square was used to test for the significance of differences between the three groups on these two measures in that nominal measurement was used. The resulting chi squares, with two degrees of freedom, were as follows: 4.3 for parental identification differences, and 3.8 for ideal-parental identification differences. Neither of these reached significance at the .05 level of confidence. Thus, the three groups did not differ in regard to direction of parental and ideal-parental identification.

Hypothesis 4 stated that differences will be found between the groups investigated on measures of perceived personality characteristics attributed to parental figures, self, and ideal self. Testing this hypothesis entailed item analysis. The distributions of category placements for each item, each sort taken separately, were subjected to

analysis of variance in order to determine what items significantly differentiated between the three groups. Because of the large number of F tests performed in analyzing this data--280 separate tests, 70 tests per sort--it was expected that some of the figures would reach significance by chance alone. This fact should be kept in mind when evaluating these results.

Table 10 includes the 22 items of the Father Sort that were significant at the .05 level of confidence or better. Means, standard deviations, and t's for these items can be found in Tables 11 and 12 respectively.

Table 13 includes the eight items of the Mother Sort that were significant at the .05 level of confidence or better. Means, standard deviations, and t's for these items can be found in Tables 14 and 15.

Table 16 includes the 15 items of the Self Sort that were significant at the .05 level of confidence or better. Table 19 includes the significant Ideal-self Sort items. Means, standard deviations, and t's are to be found in Tables 17 and 18 for the Self-sort items, and Tables 17 and 18 for the Ideal-self-sort items.

Hypothesis 5 stated that differences will be found between the three groups on a measure of self acceptance. The F ratio resulting from an analysis of variance of this measure can be found in Table 4. The F ratio demonstrated significant differences between the groups at better than the .05 level of confidence. The results of sequential analysis of group pairs by means of Fisher t's are included in Table 6.

Means and standard deviations can be found in Table 5. Inspection of this data show that, while there was no significant difference between the reactive and process groups, these groups both were significantly different from the normal group. The normal subjects were significantly more "self-satisfied" than either of the two groups of patients.

Hypothesis 6 stated that differences will be found between the three groups studied on a measure of verbal abstracting ability. The Benjamin Proverbs, used as a measure of verbal abstracting ability, was scored in two different ways, as explained in an earlier section of this study. In order to partial out the possible effect of vocabulary differences between the three groups, since vocabulary and proverbs were found to be highly correlated, proverbs results were analyzed by means of analysis of covariance. These results are included in Table 22. The resulting F ratios were significant at better than the .01 level of confidence for both methods of scoring the proverbs. The results of sequential analysis of this data by group pairs, again using the covariance method, are included in Table 23. Means and standard deviations for the proverbs, plus those for vocabulary, are included in Table 26. Inspection of this data show that all sequential comparisons except two were significant. The normal subjects scored highest, and the process schizophrenics scored lowest, the reactive schizophrenics falling midway between the other two groups. Proverbs were also analyzed by simple analysis of variance, which can be justified by the fact that vocabulary differences between groups failed to reach the .05 level of confidence. This was done in

order to support the results of the covariance analysis, which were in question because of violation of the assumption of equality of group regression coefficients. Correlation coefficients between vocabulary and proverbs were significantly lower for the reactive group than for the normal and process groups, which were not significantly different from one another. The results of the analysis of variance are included in Table 24. Sequential analysis of group pairs is included in Table 25. Inspection of these results demonstrates that significant differences between groups on proverbs were all in the same direction and of similar magnitude, as was true for analysis of the same data by means of the covariance method.

TABLE 4

Analysis of Variance of Measures of Parental
Identification and Self-Satisfaction

Measure	df	F
Father Identification	117	6.4 (p. < .01)
Ideal-Father Identification	117	7.9 (p. < .01)
Mother Identification	117	1.9 (N. S.)
Ideal-Mother Identification	117	1.1 (N. S.)
Self-satisfaction	117	4.4 (p. < .05)

TABLE 5

Means and Standard Deviations for Measures of
Parental Identification and Self-satisfaction

Measure	Mean			S. D.		
	N	R	P	N	R	P
Father Identification	.59	.34	.41	.19	.35	.37
Ideal-Father Identification	.70	.40	.52	.15	.41	.39
Mother Identification	.54	.43	.44	.22	.28	.33
Ideal-Mother Identification	.60	.51	.54	.20	.33	.27
Self-satisfaction	.68	.54	.53	.17	.30	.25

TABLE 6

Fisher t's* for Significant Measures of
Parental Identification and Self-satisfaction

Measure	Normal- Reactive	Normal- Process	Reactive- Process
Father Identification	3.89 (p. < .01)	2.71 (p. < .01)	.81 (N. S.)
Ideal-Father Identification	4.33 (p. < .01)	2.86 (p. < .01)	1.27 (N. S.)
Self-satisfaction	2.46 (p. < .05)	3.08 (p. < .01)	.25 (N. S.)

*two-tail tests

TABLE 7

Analysis of Variance of Parental
Identification Difference Measures

Measure	df	F
Discrepancy (a) (M-F)	117	8.1 (p. < .01)
Discrepancy (b) (IM-IF)	117	5.0 (p. < .01)

TABLE 8

Means and Standard Deviations for
Parental Identification Difference Measures

Measure	Mean			Variance		
	N	R	P	N	R	P
Discrepancy (a) (M-F)	.11	.34	.26	.01	.08	.10
Discrepancy (b) (IM-IF)	.17	.39	.31	.04	.13	.12

TABLE 9

Fisher t's* for Significant Parental
Identification Difference Measures

Measure	Normal- Reactive	Normal- Process	Reactive- Process
Discrepancy (a) (M-F)	5.13 (p. < .01)	2.87 (p. < .01)	1.15 (N. S.)
Discrepancy (b) (IM-IF)	11.52 (p. < .01)	4.82 (p. < .01)	1.03 (N. S.)

*two-tail tests

TABLE 10

Significant Items of the Father Sort Resulting
from Analysis of Variance of Item Distributions

Item		df	F
4	accepts others	117	4.4 (p. < .05)
10	considerate	117	6.8 (p. < .01)
11	cooperative	117	4.0 (p. < .05)
12	cruel, mean	117	6.3 (p. < .01)
15	can be depended upon	117	7.4 (p. < .01)
16	never satisfied	117	3.7 (p. < .05)
22	fair, just	117	7.3 (p. < .01)
26	easily angered	117	3.4 (p. < .05)
29	devoted	117	4.0 (p. < .05)
33	helpful	117	3.5 (p. < .05)
35	jealous	117	3.4 (p. < .05)
41	rebels against authority	117	3.4 (p. < .05)
43	punishes others	117	8.6 (p. < .01)
47	self-controlled	117	3.8 (p. < .05)
49	selfish	117	3.6 (p. < .05)
51	sense of humor	117	3.3 (p. < .05)
52	self-centered, conceited	117	4.2 (p. < .05)
57	doesn't trust others	117	4.1 (p. < .05)
59	understanding	117	5.7 (p. < .01)
61	encourages others	117	5.1 (p. < .01)
64	unhappy	117	3.1 (p. < .05)
66	criticizes others	117	3.5 (p. < .05)

TABLE 11

Means and Standard Deviations of the
Significant Items of the Father Sort

Item	Means			Standard Deviations		
	Normal	Reactive	Process	Normal	Reactive	Process
4	2.7	3.7	3.2	1.3	1.5	1.6
10	2.3	3.6	3.0	1.0	2.0	1.8
11	2.7	3.6	2.7	1.2	1.8	1.7
12	6.6	5.4	5.5	.8	1.7	1.9
15	1.6	2.5	2.7	.8	1.8	1.6
16	5.2	4.3	4.5	1.3	1.7	1.6
22	1.9	3.1	3.0	1.0	1.8	1.7
26	4.5	3.4	3.7	1.7	1.6	2.2
29	2.2	3.1	2.4	1.2	2.0	1.6
33	2.0	2.7	2.9	1.2	1.4	1.9
34	2.1	2.9	2.4	1.4	1.6	1.7
35	5.7	4.8	4.9	1.7	1.7	1.9
41	5.8	4.9	5.6	1.1	1.8	1.6
43	5.8	4.4	4.5	1.1	1.9	1.8
47	2.5	3.4	3.2	1.6	1.7	1.5
49	5.9	5.0	5.4	1.1	1.8	1.9
51	2.5	3.0	2.3	1.3	1.5	1.4
52	5.8	4.8	5.0	1.4	2.0	1.7
57	5.0	4.0	4.7	1.4	1.7	1.6
59	2.3	3.6	3.2	1.3	2.1	1.8
61	2.9	4.0	3.5	1.3	1.7	1.6
63	5.9	5.1	5.6	.9	1.7	1.4
64	5.4	4.6	5.1	1.4	1.8	1.4
66	5.0	4.1	4.2	1.1	1.9	1.8

TABLE 12:

Fisher t's* for the Significant
Items of the Father Sort

Item	Normal- Reactive	Normal- Process	Reactive- Process
4	3.13 (p. < .01)	1.59 (N. S.)	1.28 (N. S.)
10	3.87 (p. < .01)	2.17 (p. < .05)	1.55 (N. S.)
11	2.49 (p. < .05)	.15 (N. S.)	2.29 (p. < .05)
12	3.79 (p. < .01)	3.05 (p. < .01)	.31 (N. S.)
15	3.12 (p. < .01)	4.14 (p. < .01)	.53 (N. S.)
16	2.65 (p. < .05)	2.13 (p. < .05)	.53 (N. S.)
22	3.69 (p. < .01)	3.39 (p. < .01)	.32 (N. S.)
26	2.82 (p. < .01)	1.69 (N. S.)	.70 (N. S.)
29	2.68 (p. < .01)	.81 (N. S.)	1.82 (N. S.)
33	2.29 (p. < .05)	2.45 (p. < .05)	.53 (N. S.)
34	2.53 (p. < .05)	.87 (N. S.)	1.50 (N. S.)
35	2.49 (p. < .05)	2.03 (p. < .05)	.37 (N. S.)
41	2.55 (p. < .05)	.66 (N. S.)	1.70 (N. S.)
43	3.85 (p. < .01)	3.83 (p. < .01)	.12 (N. S.)
47	2.54 (p. < .05)	2.17 (p. < .05)	.48 (N. S.)
49	2.90 (p. < .01)	1.62 (N. S.)	1.03 (N. S.)
51	1.84 (N. S.)	.66 (N. S.)	2.35 (p. < .05)
52	2.67 (p. < .01)	2.43 (p. < .05)	.43 (N. S.)
57	2.80 (p. < .01)	.81 (N. S.)	1.88 (N. S.)
59	3.29 (p. < .01)	2.67 (p. < .01)	.80 (N. S.)
61	3.23 (p. < .01)	1.90 (N. S.)	1.30 (N. S.)
64	2.46 (p. < .05)	.88 (N. S.)	1.52 (N. S.)
66	2.43 (p. < .05)	2.27 (p. < .05)	.24 (N. S.)

*two-tail tests

TABLE 13

Significant Items of the Mother Sort Resulting
from Analysis of Variance of Item Distributions

Item		df	F
12	cruel, mean	117	3.8 (p. < .05)
20	easily hurt	117	4.6 (p. < .05)
33	helpful	117	3.3 (p. < .05)
38	keeps at it	117	3.1 (p. < .05)
52	self-centered, conceited	117	6.8 (p. < .01)
58	gives in to others easily	117	3.7 (p. < .05)
62	loving	117	3.9 (p. < .05)
68	quiet	117	4.5 (p. < .05)

TABLE 14

Means and Standard Deviations of the
Significant Items of the Mother Sort

Item	Means			Standard Deviations		
	Normal	Reactive	Process	Normal	Reactive	Process
12	6.8	6.5	6.2	.5	.8	1.5
20	3.0	3.9	3.9	1.6	1.6	1.5
33	1.9	2.2	2.6	.9	1.2	1.4
38	2.8	2.6	2.1	1.2	1.4	1.1
52	6.5	5.5	5.5	.9	1.7	1.6
58	3.9	4.0	4.7	1.7	1.7	1.3
62	1.4	1.9	2.2	.8	1.3	1.6
68	2.9	4.1	3.4	1.7	1.8	1.9

TABLE 15

Fisher t's* for the Significant
Items of the Mother Sort

Item	Normal- Reactive	Normal- Process	Reactive- Process
12	1.97 (p. < .05)	2.49 (p. < .05)	1.31 (N. S.)
20	2.58 (p. < .05)	2.66 (p. < .01)	.00 (N. S.)
33	1.07 (N. S.)	2.56 (p. < .05)	1.44 (N. S.)
38	.62 (N. S.)	2.60 (p. < .05)	1.72 (N. S.)
52	3.48 (p. < .01)	3.46 (p. < .01)	.21 (N. S.)
58	.27 (N. S.)	2.61 (p. < .05)	2.25 (p. < .05)
62	2.27 (p. < .05)	2.69 (p. < .01)	.69 (N. S.)
68	3.06 (p. < .01)	1.27 (p. < .05)	1.69 (N. S.)

*Two-tail tests.

TABLE 16

Significant Items of the Self Sort Resulting
from Analysis of Variance of Item Distributions

Item		df	F
4	accepts others	117	9.5 (p. < .01)
5	bossy	117	4.0 (p. < .05)
6	calm	117	4.4 (p. < .05)
14	dependent on others	117	9.3 (p. < .01)
17	emotional	117	3.1 (p. < .05)
21	lots of energy	117	9.4 (p. < .01)
27	helpless	117	3.8 (p. < .05)
35	jealous	117	4.8 (p. < .01)
50	self-pitying	117	6.1 (p. < .01)
56	stubborn	117	4.1 (p. < .05)
63	confused	117	3.2 (p. < .05)
64	unhappy	117	4.6 (p. < .05)
65	cool toward others	117	4.1 (p. < .05)
66	criticizes others	117	3.3 (p. < .05)
68	quiet	117	4.4 (p. < .05)

TABLE 17

Means and Standard Deviations of the
Significant Items of the Self Sort

Item	Means			Standard Deviations		
	Normal	Reactive	Process	Normal	Reactive	Process
4	1.8	2.8	2.9	1.1	1.4	1.4
5	5.1	5.9	5.7	1.5	1.3	1.3
6	2.6	3.7	3.3	1.4	1.8	1.5
14	5.4	3.9	4.0	1.4	2.0	1.7
17	4.0	3.1	3.4	1.9	1.7	1.5
21	2.6	3.0	4.2	1.1	1.9	2.0
27	6.3	5.8	5.4	.8	1.6	1.4
35	4.6	4.1	5.4	1.9	1.5	2.1
50	6.2	5.5	5.1	.8	1.7	1.5
56	3.7	4.4	4.7	1.7	1.6	1.8
63	5.7	4.9	4.8	1.2	1.9	2.0
64	5.3	4.7	4.1	1.1	2.0	1.9
65	4.5	4.6	3.7	1.8	1.4	1.5
66	4.7	5.4	5.3	1.5	1.1	1.3
68	3.5	2.9	2.3	2.2	1.4	1.8

TABLE 18

Fisher t's* for the Significant
Items of the Self Sort

Item	Normal- Reactive	Normal- Process	Reactive- Process
4	3.81 (p. < .01)	3.98 (p. < .01)	.16 (N. S.)
5	2.62 (p. < .05)	1.99 (p. < .05)	.70 (N. S.)
6	3.15 (p. < .01)	1.85 (N. S.)	1.00 (N. S.)
14	4.20 (p. < .01)	3.63 (p. < .01)	.12 (N. S.)
17	2.44 (p. < .05)	1.50 (N. S.)	.92 (N. S.)
21	1.19 (N. S.)	4.67 (p. < .01)	2.67 (p. < .01)
27	1.74 (N. S.)	2.84 (p. < .01)	1.09 (N. S.)
35	1.19 (N. S.)	1.96 (p. < .05)	3.11 (p. < .01)
50	2.62 (p. < .05)	3.61 (p. < .01)	1.00 (N. S.)
56	1.85 (N. S.)	2.86 (p. < .01)	.93 (N. S.)
63	2.19 (p. < .05)	2.52 (p. < .05)	.17 (N. S.)
64	1.85 (N. S.)	3.22 (p. < .01)	1.19 (N. S.)
65	.40 (N. S.)	2.19 (p. < .05)	2.86 (p. < .01)
66	2.09 (p. < .05)	2.19 (p. < .05)	.09 (N. S.)
68	1.23 (N. S.)	2.97 (p. < .01)	1.81 (N. S.)

*two-tail tests

TABLE 19

Significant Items of the Ideal-self Sort Resulting
from Analysis of Variance of Item Distributions

Item		df	F
1	absent-minded	117	4.0 (p. < .05)
2	puts on an act	117	5.2 (p. < .01)
15	can be depended upon	117	3.4 (p. < .05)
22	fair, just	117	6.1 (p. < .01)
29	devoted	117	5.2 (p. < .01)
36	lazy	117	3.3 (p. < .05)
43	punishes others	117	4.1 (p. < .05)
44	restless	117	5.4 (p. < .05)
59	understanding	117	3.3 (p. < .05)

TABLE 20

Means and Standard Deviations of the
Significant Items of the Ideal-self Sort

Item	Means			Standard Deviations		
	Normal	Reactive	Process	Normal	Reactive	Process
1	5.4	5.8	6.0	1.0	1.0	.9
2	5.8	5.0	5.3	1.0	1.0	1.2
15	1.6	2.1	2.0	.8	.8	.9
22	1.5	1.7	2.1	.6	.7	.9
29	2.0	1.9	2.6	.9	.9	1.1
36	6.3	6.2	5.7	1.2	1.1	1.2
43	6.2	5.7	5.6	.7	1.0	1.1
44	4.6	5.2	5.3	.9	1.2	1.2
59	1.7	1.5	1.9	.8	.6	.8

TABLE 21

Fisher t's* for the Significant
Items of the Ideal-self Sort

Item	Normal- Reactive	Normal- Process	Reactive- Process
1	1.84 (N. S.)	2.86 (p. < .01)	.94 (N. S.)
2	3.41 (p. < .01)	1.76 (N. S.)	1.37 (N. S.)
15	2.57 (p. < .05)	1.94 (N. S.)	.50 (N. S.)
22	1.29 (N. S.)	3.41 (p. < .01)	2.10 (p. < .05)
29	.49 (N. S.)	2.48 (p. < .05)	2.93 (p. < .01)
36	.59 (N. S.)	2.41 (p. < .05)	1.88 (N. S.)
43	2.50 (p. < .05)	2.43 (p. < .05)	.22 (N. S.)
44	2.50 (p. < .05)	3.28 (p. < .01)	.66 (N. S.)
59	1.18 (N. S.)	1.32 (N. S.)	2.68 (p. < .01)

* two-tail tests

TABLE 22

Covariance Analysis of Benjamin Proverbs
with Vocabulary Score Controlled

Measure	df	F
Proverbs #1	117	5.1 (p. < .01)
Proverbs #2	117	8.1 (p. < .01)

TABLE 23

Sequential Covariance Analysis of Benjamin
Proverbs with Vocabulary Score Controlled

Measure	F* Normal- Reactive	F* Normal- Process	F* Reactive- Process
Proverbs #1	6.90 (p. < .01)	25.87 (p. < .01)	3.71 (N. S.)
Proverbs #2	2.83 (N. S.)	16.33 (p. < .01)	4.06 (p. < .05)

*one-tail tests

TABLE 24

Analysis of Variance of Benjamin Proverbs

Measure	df	F*
Proverbs #1	117	12.7 (p. < .01)
Proverbs #2	117	10.5 (p. < .01)

*two-tail tests

TABLE 25

Fisher t's* for Sequential
Analysis of Benjamin Proverbs

Measure	Normal- Reactive	Normal- Process	Reactive- Process
Proverbs #1	7.29 (p. < .01)	24.08 (p. < .01)	4.16 (p. < .01)
Proverbs #2	3.07 (p. < .01)	13.49 (p. < .01)	2.86 (p. < .01)

*one-tail tests

TABLE 26

Means and Standard Deviations for
Benjamin Proverbs and Vocabulary

Measure	Means			Standard Deviations		
	Normal	Reactive	Process	Normal	Reactive	Process
Proverbs #1	51.0	46.4	42.4	7.3	8.6	9.4
Proverbs #2	47.7	43.5	37.9	10.4	11.1	13.5
Vocabulary	41.5	39.6	36.9	11.0	15.2	14.6

DISCUSSION

Parental Identification

The primary objective of this study was to investigate the question of whether differences exist between male schizophrenics and normal male subjects on measures of parental identification. To this end, four measures of parental identification were used. Two of these measures, father identification and mother identification, were based on the correlation between the subject's perception of himself and his perception of each parent. The remaining two measures, ideal-father identification and ideal-mother identification, were based on the correlation between the subject's perception of the way he would like to be and his perception of each parent. Parental identification was operationally defined in terms of these measures. The source of data comprising the dependent variable, then, was each subject's perception of himself and his parents. This point should be emphasized because it has important implications for interpreting the findings of this study. Phenomenologically, a subject responds to a stimulus in accordance with the way he perceives that stimulus, and, furthermore, this response includes an interplay between the objective nature of the stimulus, the subject's past experiences in relation to that stimulus, and aspects of the subject's projected needs and defenses. The measures of parental identification used here, accordingly, can be said to reflect information

about important aspects of the subject's environment, as well as his subjective response to that environment.

Schizophrenics, both reactive and process, did not differ significantly from normals in extent of maternal identification. This was true for both mother and ideal-mother identification measures. In sharp contrast were the results for both father and ideal-father identification. Differences between the three groups on these measures reached a high level of statistical significance. Normals showed significantly greater paternal identification than did either reactive or process schizophrenics. There were no significant differences, however, between the reactive and process patients on either of the two father identification measures. To be more specific, normals perceived themselves as more similar to their fathers than did either the reactive or process schizophrenics. Furthermore, normals perceived their fathers as more desirable persons to identify with than did either of the patient groups. Schizophrenics, conversely, not only identify less with their fathers but also perceive them as poor masculine models.

A seemingly reasonable conclusion from these findings is that schizophrenics lack an adequate internalized sense of masculine identification. This applies equally for reactive and process schizophrenics, a conclusion that seems contrary to the implication of a statement made by Garnezy and Rodnick (1959) to the effect that reactive schizophrenics have the benefit of stronger masculine identification models. They stated: "It would certainly be congruent with current knowledge of the

identification process to find that the more assertive role of the father in good premorbid families is reflected in the greater social adequacy and maturity level achieved by their sons...(p. 464)."

It should not be overlooked, however, that quality, as well as extent of paternal identification, must be taken into account, a possibility that will be expanded upon as this discussion progresses.

The present findings encourage speculation regarding some aspects of commonly observed behavioral phenomena characteristic of the schizophrenic. One can wonder, for example, what the relationship is between level of masculine identification among schizophrenics and the frequency of sexual content in their delusions and hallucinations. It is relatively common to observe a patient suffering from fear of homosexuality. Common too is the observation of bisexual tendencies among schizophrenics. In a social world divided roughly but definitely by "male" and "female" roles and interpersonal expectations, the male weak in masculine skills would presumably be seriously handicapped. Most authorities agree that these skills are learned initially in the family, and that failure, or lack of opportunity, to internalize these would understandably have strong social repercussions.

Although few studies devote any more than lip service to the role of the father in the family of the schizophrenic, compared to the emphasis placed on the mother, the present findings of weak paternal identification among schizophrenics were not entirely unanticipated. Blum and Rosenweig (1944), after surveying case history materials,

reported that parental deaths occurred far more frequently among schizophrenics, and that these tended toward the paternal side for male patients as opposed to the maternal side for female patients. Weak masculine identification could presumably result as easily from absence of a masculine model as from the presence of an inadequate model. More recently, Wahl (1956) reported similar findings after surveying family histories of male schizophrenics. He concluded that the relationship with the father plays a more crucial role in the development of the male child than had previously been considered, and, that his loss or rejection may operate as a major stress situation.

The inadequacies of the schizophrenic's father have been alluded to in several papers. Ellison and Hamilton (1949), for example, found a large proportion of the fathers of schizophrenics to be either sadistic and domineering or indifferent and extremely passive. Frazee (1953) described such fathers in similar terms. Gerard and Siegel (1950) commented on the immature, quiet, and passive characteristics of these fathers, and Reichard and Tillman (1950) discussed the domineering and sadistic type of father who overtly rejects his pre-schizophrenic child.

A few papers have pointed out the peril of emphasizing one parent to the neglect of the other. Lidz and Lidz (1949), for example, commented that if their patients had had the benefit of a stable father figure, the mother's pathology would likely not have been so damaging. The more recent findings of Lidz and his associates (Fleck, 1960) also underscore the importance of observing the parents in relation to one

another. They have pointed out that the personality disturbances of each parent are not nearly so relevant to understanding the psychopathology of the child as is the fact that each parent is paired with a mate who either acquiesces to the irrationalities of the other or constantly battles and undermines the other's role. Bowen, Dysinger and Basamania (1959) described the "domination-submission" issue between parents in families with a schizophrenic child. The overadequate parent, according to these authors, is seen as "domineering," while the inadequate parent is seen as "forced to submit." Both parents complain of being dominated and of having to submit to the other. The mother most often "got her way," however, while the father opposes. The mother is usually closer to the patient, the father being voluntarily or involuntarily excluded. In this brief statement of parental interactions, it is evident that parental roles in the family can be understood only if they are observed in relationship to one another. The father of the schizophrenic appears to be struggling with his wife over his masculine place in the family, a struggle he repeatedly loses. One wonders if the "fighting spirit" of the fathers described by Bowen and associates may be largely a consequence of the kinds of families selected, rather than being typical for schizophrenic families in general. More intact, middle or upper-middle-class families tend to be selected, as opposed, say, to split, lower-class families. If this proposal is correct, the kind of struggle found in these families may tend to be permanently resolved in favor of the wife in the more typical family of the schizophrenic. One might expect the fathers in these latter families to

either have left the family or to have permanently submitted to the wife's demands. Whatever the situation, whether the family is intact or split, upper class or lower class, the outcome would be relatively similar: the absence of or lack of an adequate masculine model.

The present findings of greater discrepancy between parental identification scores for schizophrenics in general, as compared to normals, appear to add some credence to the proposals discussed in the preceding paragraph regarding parental interactions within the family of the schizophrenic. These findings also appear to bear on the repeated reference in the literature of marked parental conflict in such families. It is certainly evident that schizophrenics reflect these family conflicts in the extent to which they identify with one parent and not with the other.

Authority patterns in the family of the schizophrenic were studied by Kohn and Clausen (1956) who reported that the mothers in these families, as described by patients, tended to be the central authority figures, while the fathers tended to be passive and to lack authority in the family. These authors also reported that patients tended to describe themselves as closer to their mothers than to their fathers. These findings, they felt, suggested a linkage with sex-role identification and affection ties. This suggestion is supported by the results of the present study. Although the present findings provide no direct information relevant to authority roles and affectional ties within the families of the schizophrenics seen, they do suggest

that the schizophrenic shows preference for the mother over the father. This does not necessarily imply sex-role inversion in schizophrenics, as one might expect to find in the overt homosexual, but, instead, it points to an absence of adequate male identification. Neither is there support for the possibility that male schizophrenics identify more with the mother, say, out of need for compensation for inadequate paternal identification. Inspection of the data, in fact, indicates a tendency, although not significant, for patients to identify less with their mothers than do the normals. The difference between reactives and normals was in fact significant, although an overall test was not. These comments can be summarized by stating that schizophrenics tend, as compared to normals, to identify less with both parents. These differences fail to reach significance for measures of mother identification, but are highly significant for measures of father identification.

Further analysis of the present findings provides additional information about the question of role reversal in schizophrenic families. Although none of the following relationships reached significance, comparison of the mean parental identification scores for each group shows that for normals, father identification scores are greater than mother identification scores, whereas the reverse is true for both the reactive and process schizophrenics.¹ Even though it must be emphasized that none of these differences were significant, the consistency of these relationships between parental identification measures is remarkable,

¹These comparisons were made by means of tests for the comparison of differences between correlated samples.

and certainly can be interpreted as suggesting a tendency toward reversal of parental roles in the family of the schizophrenic.

A few additional comments can be made about the findings relevant to maternal identification. Actually little can be deduced from these findings aside from the fact that schizophrenics showed as much maternal identification as did normals. This, of course, does not imply that the mother is necessarily a "desirable" identification model, i.e., these findings impute nothing about the quality of the maternal model. If the mother of the schizophrenic does tend to be dominant, overprotective, and restrictive in her attitude toward her son, as so much of the literature has indicated, then these maternal characteristics do not appear to impede the son's identification with her. One possibility, however, is that the son has no alternative but to identify with the mother, while he does have such a choice regarding the father. The mother is the infant's first contact with the world outside of himself, a contact which occurs at a time when the infant's powers of discrimination are minimal. Forming a relationship with the mother is a life and death situation for the infant. In contrast, identification with the father is not so much a matter of survival. The father's role during the child's initial development is secondary, but as the child develops sex-role discrimination, it becomes more significant, and the father gradually occupies a more crucial role in his development. One can speculate that it is during this later period, where the learning of the masculine role occurs, that the preschizophrenic fails to identify

with his father. This speculation leaves the question, "Why?" Is the father simply an inadequate male model? Or is he rendered so by the mother's dominant, aggressive, undermining behavior? Is the mother dominant or does she simply fill a vacuum in the family? Is she overprotective or simply a shield between her relatively helpless child and a hostile, rejecting father? These are questions that cannot be answered directly by measures of parental identification.

So far, this discussion has centered around statistical results pointing to greater mother identification than father identification in both groups of schizophrenics. Close scrutiny of the raw data indicates, however, that, although this parental identification pattern is a significant trend, there are exceptions. Comparing the three groups in terms of negative parental identification scores, we find that schizophrenics, compared to normals, showed not only far more negative paternal identification scores, but a significant number of negative maternal identification scores as well.¹ The presence of these raw scores suggests that the pattern of stronger maternal identification in male schizophrenics may be contributory but not necessary for the development of schizophrenia. The necessary condition, for example, may be affectional ambivalence or rejection on the part of one or both parents.

At this point in this discussion it would seem appropriate to discuss implications of the present findings in the light of theoretical

¹The frequency of negative father identification scores were as follows: normal, 0; reactive, 10; process, 8. The frequency of negative mother identification scores were as follows: normal, 1; reactive, 5; process, 4.

proposals relevant to the concept of identification. Freud was first to use the concept of identification, and subsequent proposals have in general been modifications and qualifications of his basic thinking. According to Freud, the human infant's utter dependency for release from unpleasant stimulation renders the early role of the mother and her relationship to him crucial to the infant's future development. Through the process of primary identification, the infant begins to react with the objective world of reality, and the mother is literally the infant's first contact with the external world. Hence, the mother becomes the first love object at a time when his powers of discrimination are minimal. The infant must, out of necessity, identify with the mother, and that this identification, within certain limits, would be rather indiscriminate. Only under unusual conditions would maternal identification not take place, e.g., under conditions of overt rejection or neglect. "Indiscriminate" is used here to refer to the infant's obliviousness to the subtle qualities of a "good" or "bad" mother. This line of reasoning has already been used as a rationale for explaining the present evidence for positive maternal identification.

The process of secondary identification, according to Freud, occurs during the phallic stage of development when powers of discrimination are more acute. This developmental stage involves the oedipus complex. According to this view, the boy "loves" the mother and resents the father because he is perceived as a rival for the mother's affections. The infant identifies with the father out of fear of the father, thus laying the foundation for the superego. By "becoming"

the father, the son begins to enjoy advantages of the masculine role. Failure to identify with the father presumably leads to homosexuality. In the opinion of the present author, however, whether homosexuality takes place probably depends largely upon whether the mother encourages or discourages heterosexual behavior in her son. The present results do not point to an absence of male identification, but, instead, the existence of weak male identification among male schizophrenics. Since the formation of the superego depends largely upon the male identification model, one would expect the pre-schizophrenic to possess a weak or at least easily weakened superego. The implication of this last statement is that internalized masculine standards and ideals are tenuously integrated, include attitudes of ambivalence, and are consequently easily disturbed by external stress. Ambivalence has been used here to indicate the existence of both positive and negative attitudes and feelings toward the internalized masculine model. These comments, it might be pointed out, are not supportive of Freud's conception of psychosis as a conflict between ego and id, which is resolved by breaking with reality and giving in to the impulses of the id. They are more in line, instead, with Wexler's (1953) formulations that it is the schizophrenic's "archaic superego" that is in need of support against the primitive impulses of the id.

It is difficult, and perhaps pointless, to attempt to incorporate Anna Freud's concept of "identification with the aggressor" into the present discussion, since the results of this study only remotely lend themselves to interpretation in terms of this concept. One might

speculate, however, that the mother of the schizophrenic may be perceived as the more powerful figure in the family constellation, an interpretation based on the finding of greater identification with the mother than with the father. But then one must ask the question of whether the mother is perceived by the subject as more powerful in the sense that she is an aggressive, threatening figure, or in the sense that she is the giver of nurturance, praise, or affection, while the father is not. Is the child fearful of the mother and thus identifies with her instead of the father in order to reduce anxiety induced by her? Or does the child identify with the mother because she is a more dependable source of direct social reward, as Dollard and Miller propose?

Kagan would likely argue that the pre-schizophrenic child identifies more with the mother than with the father because the mother possesses goal states (attributes and satisfactions) that the child desires or admires. The subject thus strives in fantasy and behavior to be more like the mother, and, conversely, less like the father, who possesses relatively more goal states that are not desired or admired by the subject. The importance of Kagan's proposals is that first he places emphasis on the subject's perception of the model, and second he defines the motivation for the identification response as the desire to be like the model. The motive thus has a positive aspect as opposed to the negative implications of the concept of anxiety, which is central to the psychoanalytic theory of identification. According

to Kagan's proposals, the identification model is "admired" by the subject, and, as a consequence, the subject strives to be like the model. Perception of similarity then reinforces the identification response. The measures of parental identification used in this study were based on perception of self and parents, consistent with Kagan's proposals, and the results certainly support the utility of using this approach. Furthermore, the emphasis on positive motivation of identification seems to have intrinsic advantages for measurement over the rather global notion of anxiety. The latter experience by its very nature is subjectively avoided and distorted, rendering it unreliable in terms of response measurement. Admittedly, anxiety is in many respects the reciprocal of the motivation proposed by Kagan, but it is difficult to conceive of how anxiety alone can explain a subject's efforts to seek out and be like a model.

Parental Personality Characteristics

Additional insight into the schizophrenic's perception of his parental environment can be gained from study of the parental trait placements that differentiated between the groups.

Relatively few items of the mother sort significantly differentiated between the groups. Of the small number that did, self-centered and conceited differentiated between the groups at better than the .01 level of confidence, all others differentiating at better than the .05 level. Schizophrenics rated their mothers as more self-centered and conceited than did normals. Both groups of schizophrenic also rated

their mothers as less loving, and less easily hurt, but more quiet, cruel, and mean. Process patients, in contrast, rated their mothers as less inclined to give in to others easily, less helpless, and more inclined to keep at it than did normals or reactives.

The mothers of schizophrenics, whether reactive or process, appear to have much in common. They are rated by their sons as narcissistic and rejecting. The mother of the process patient is depicted as more aggressive and independent, as compared to the more passive nature of the reactive's mother. These results suggest that the mother of the process patient may tend to be dominant, while the mother of the reactive may tend to be overprotective. Reichard and Tillman (1950) found that "schizophrenogenic mothers" could be divided into these two types, and their descriptions of these mothers correspond roughly with the present findings. Farina's (1960) findings of a dominant mother in the family of the process schizophrenic, and a submissive mother in the family of the reactive schizophrenic appear to be consistent with the present findings.

A comparatively large number of items of the father sort differentiated between the groups. This would seem to add even greater emphasis to the significance of the paternal role already demonstrated by the parental identification measures. Schizophrenics, both reactive and process, rated their fathers as less accepting, considerate,¹ dependable,¹ helpful, self-controlled, understanding,¹ and just.¹ These

1. These items were significant at the .01 level of confidence or better.

fathers were also rated as more cruel,¹ jealous, self-centered, critical, and more inclined to punish¹ and never be satisfied. Reactives rated their fathers as less devoted, accepting, cooperative, encouraging of others, and good natured, and having less of a sense of humor than did normals or process patients. These same fathers were rated as more unhappy, selfish, easily angered, inclined to rebel against authority, and not trusting others. The process patients rated their fathers as more cooperative and as having more of a sense of humor than did the reactive patients.

It is evident that the father is perceived as a source of considerable frustration and conflict by his schizophrenic son, much more so than is the mother. In a few words, he is depicted as giving little and expecting much. He is rejecting toward his son, and obviously perceived by him as a very poor model to identify with. The father of the reactive is described as the least content and the most aggressive, and he is likely least identified with his family. The father of the process patient, on the other hand, appears to be more passive, and less inclined to act out his feelings.

The father of the reactive appears to correspond to the overtly rejecting "schizophrenogenic father" described by Reichard and Tillman (1950), whereas the father of the process patient appears to correspond to the passive father described by Kohn and Clausen (1956). Moreover, these results appear to support those of Farina (1960), who reported an

1. Significant at the .01 level or better.

ascendant father in the good premorbid parent group and a submissive father in the poor premorbid parent group. Consistent with Farina's findings, the present findings regarding parental personality characteristics suggest a dominant father-submissive mother pattern in the family of the reactive, and a submissive father-dominant mother pattern in the family of the process schizophrenic. It is rather surprising, assuming that these parental patterns do exist, that they have little differential effect on the direction of parental identification. Evidently the fathers of schizophrenics are perceived as equally poor models for identification, whether they are passive or aggressive in disposition. The common element communicated to the son may be the attitude of rejection, and it may make little difference whether this attitude is expressed overtly or in a passive way. One possibility that should not be overlooked is that the lack of paternal identification true for both reactive and process schizophrenics is a product of parental interaction. It may be, for example, that the reactive finds it difficult to form a male identification because of the father's overtly rejecting attitude, whereas the process patient is unable to form a male identification more as a result of the mother's interference. The mother of the process patient may actively intimidate her husband, as well as her son, making it threatening for the son to behave in a masculine manner. The mother of the reactive patient, conversely, may encourage her son to become masculine, but be thwarted in these efforts by the husband's attitude. This possibility may help explain the greater social adequacy of the reactive schizophrenic.

The common stress factor for all schizophrenics may be the failure to receive genuine love as suggested by Reichard and Tillman (1950), but, as stated in the preceding paragraph, the prognostically differentiating factor may involve the role expectations learned within the family constellation. This hypothesis would appear to have important implications for the ultimate social adequacy of the son. Reichard and Tillman describe genuine love as involving a strong personal attachment to the other, and an altruistic appreciation for the other's growth, welfare, and happiness. These authors also stress the need for flexibility in the expression of this emotion, as well as the need to respect the other's sense of personal autonomy. From the parental descriptions provided by the patients that participated in this study, it is evident that there is serious doubt as to whether or not they received such genuine love from their parents.

Self and Ideal Self

In recent years, the Q-sort has been used as a means of measuring the rather global concepts of "adjustment level," "self-satisfaction," or "self-acceptance." These efforts are based primarily on the proposals of self theorists (Combs & Snygg, 1959; Rogers, 1947) that these concepts are all closely related. Some studies have confirmed these proposals (e.g., Rogers & Dymond, 1954), but others have cast some doubt on their use with psychotic patients (e.g., Friedman, 1955), especially paranoid patients who make unrealistic self-appraisals. The most frequently used measure of these concepts has been a correlation

between self sort and ideal-self sort. The sorts used in this study to derive parental identification measures also made it possible to derive "self-acceptance" measures for the three groups studied.

Significant differences were found between the three groups on this measure. Normals demonstrated significantly more self-acceptance or self-satisfaction than did either of the schizophrenic groups. No significant differences were found between the two schizophrenic groups.

These results suggest that the patients used in this study were relatively realistic in evaluating themselves. This finding is particularly interesting in view of the fact that approximately one-third of these patients carried the diagnosis of paranoid schizophrenia. These results seem contrary to those reported by Friedman of unrealistic self-enhancement among paranoid schizophrenics.¹

Item analysis of the self and ideal-self sorts provided some additional contrast between the three groups studied. Both groups of schizophrenics, as compared to normals, rated themselves as less critical and accepting of others, and as more dependent on others, self-pitying, and confused. Process schizophrenics, as compared to the other groups, rated themselves as more quiet, unhappy, helpless, and cool toward others, but as being less jealous, stubborn, and as having less energy.

These item differences seem to point to the emotional and interpersonal difficulties characterizing both groups of schizophrenics, and

1. No statistical difference was found between paranoid schizophrenics and patients carrying another psychiatric diagnosis.

suggest conflicts centering around dependency and distrust of others. Of the two groups of patients, it is evident that the reactive perceives himself as more outgoing and aggressive than does the process schizophrenic, who perceives himself as more passive.

These self-evaluations have some interesting parallels with the father evaluations discussed earlier. The process schizophrenic describes not only himself as passive, but describes his father in similar terms. This is also true of the reactive schizophrenic who describes himself and his father as more aggressive. Moreover, the process patient's self-evaluation closely approximates the personality picture presented by the classical criteria of the schizophrenic personality. The reactive's self-evaluation, on the other hand, approaches the more atypical forms of this disorder.

As for the differentiating items of the ideal sorts, schizophrenics, both reactive and process, rated restless as less ideal, and punishes others as more ideal. The reactives rated putting on an act as more ideal, and being dependable as less ideal, than did either of the other two groups. Reactives also rated fair and just, devoted, and understanding as more ideal than did the process patients. The process patients, in contrast, rated absent minded, fair and just, devoted, and restless as less ideal, but punishes others and lazy as more ideal.

It is interesting that the reactive rated as more desirable items having to do with close interpersonal relations, e.g., understanding, devoted, but also placed greater value on putting on an act and not

being depended upon. On the surface this composite of items suggests underlying dependence-independence conflicts. Process patients, in contrast, appear to have little drive for interpersonal relationships. In comparison to the inert characteristics of the process schizophrenic, the reactive appears motivated to seek out relationships with others and maintain a sense of personal autonomy. One might speculate that life outside the family unit for the reactive is full of hazards, but for the unwilling process patient it is confusing and intolerable.

Verbal Abstracting Ability

Both reactive and process schizophrenics demonstrated significant decrements in verbal abstracting ability when compared with normals. By far the greatest decrement in abstraction was demonstrated by process schizophrenics, although reactive schizophrenics also demonstrated significant decrement, showing that they were by no means free of impairment. These findings are somewhat complicated, however, by the covariance violation cited in the Results section of this study and the fact that two methods of scoring proverbs were used. For the first method of scoring proverbs, sequential analysis by covariance demonstrated highly significant differences between normals and both schizophrenic groups, but no significant difference between reactives and process patients. When this same data was analyzed by Fisher t tests, all of the differences were highly significant. Thus, for the first method of scoring the proverbs, holding vocabulary constant tended to eliminate differences on proverbs between reactive and process schizophrenics. For the second

method of scoring the proverbs, on the other hand, holding vocabulary constant tended to eliminate differences between reactives and normals, as can be observed by comparing the differences between covariance analysis and analysis by means of Fisher t's. Since those results of sequential analysis that failed to reach significance nevertheless approached significance, the differences between the two methods of statistical analysis of proverbs scores may be largely a statistical artifact. The overall findings for proverbs are nevertheless in agreement with those of other investigators (Becker, 1956; Benjamin, 1944; Gorham, 1956a, 1956b; Herron, 1962b; Lewinsohn & Riggs, 1962; Lewis, et al., 1959; Meadow, et al., 1952, 1953a, 1953b) who used proverbs as a measure of verbal abstracting ability. Although Becker, Herron, and Lewinsohn and Riggs prognostically dichotomized schizophrenics, none of these investigators used the Phillips Scale to do so, as was done in this study. Becker used the Elgin Scale but included no control group. Herron included a control group in his study but differentiated good and poor prognostic patients by means of the Barren Ego-Strength Scale and psychiatric ratings. Lewinsohn and Riggs also included a control group but simply grouped patients into acute and chronic categories.

In contrast to earlier studies, more recent investigators have made efforts to study abstracting ability with general intelligence partialled out, since these variables are highly correlated. These efforts have most frequently taken the form of matching groups on vocabulary scores. Becker attempted to solve this problem by using a

proverbs-vocabulary discrepancy score based on standard score differences between vocabulary and proverb scores. This procedure, in this investigator's opinion, is not defensible because no standard distribution is available for conversion of raw proverb scores to standard scores. Herron both matched his groups on vocabulary scores and used covariance analysis in order to eliminate possible effects of vocabulary differences. This procedure was used in the present study, but with some qualification. The vocabulary-proverb regression lines for the three groups failed to have the same slope, thus violating a crucial assumption of covariance analysis. Although these correlations were equivalent for the normal and process groups, the correlation for reactives was significantly less. As a result of this violation of the covariance technique, the data was also analyzed by simple analysis of variance. This was felt to be justified as a means of corroborating the covariance results because no significant differences existed between the groups on vocabulary. That the violated assumption did not significantly alter the results is attested to by the fact that all F ratios, as well as critical ratios between group pairs, were significant.

As to why reactives demonstrated significantly less correlation between these variables, the present investigator was unable to find any obvious explanation. One possibility is that the reactive patient was experiencing considerably more subjective stress, and, perhaps, more tenuous ego control, than was true of his normal or process counterparts.

Correlational analysis between proverbs and other variables used in this study also turned up some rather interesting relationships: For the reactive group only, proverbs were found to be negatively correlated with ideal-father identification ($r = -.33$ $p. < .05$) and positively correlated with parental identification discrepancy scores ($r = .47$ $p. < .01$).¹ For the process group only, proverbs were negatively correlated with mother identification ($r = -.35$ $p. < .05$). No such significant correlations between proverbs and parental identification were found for the normal group; however, close inspection of the correlation coefficients suggested more similarity with the process group than with the reactive group, i.e., proverbs tended to be more correlated with mother identification alone rather than ideal-father identification and parental identification discrepancy scores. Caution is necessary in evaluating these findings, however, because of the large number of correlation coefficients involved. These findings suggest that the verbal abstracting ability of the reactive schizophrenic is related to the respect he has for his father, i.e., the patient's perception of his father's adequacy as a model to identify with. The less adequate the father as a model the better is the patient's proverbs score. Moreover, the greater the difference between parents in terms of the patient's identification with them the poorer is his proverbs score. Conversely, for process patients,

1. The correlations reported are for Proverbs #1 only; those for Proverbs #2 were comparable.

the greater their identification with mother the poorer is their ability to deal with proverbs.

The meaning of these relationships is not clear, but they do point tentatively to a link between certain ego functions and parental influences. It is evident that the father appears to be a more central figure in understanding the premorbid experiences of the reactive than is true of the process schizophrenic. The relatively severe concreteness of the process patient, on the other hand, appears to be linked with his experiences in relation to his mother. One might speculate that the reactive schizophrenic is struggling with masculine identification problems, whereas the process schizophrenic, never having reached this stage of development, is still in infantile conflict with his mother.

Suggestions for Further Research

As one carries out a study such as this one, ideas for further research are so numerous and frequent that it is easy to become sidetracked and lose sight of the original research goal. Hopefully, the future will permit a follow-up of at least some of these ideas. In the following statements are a few of the more immediate interests of the present author for further research stemming from this study.

1. A review of the literature soon makes it evident that very few empirical studies have focused attention upon parental identification and the relationship of this variable to other variables of behavior. A few involving children have been reported, but practically nothing involving adult populations, whether normal or psychopathological. As

stated in an earlier section, to the present author's knowledge, this study is the first empirical study of parental identification in schizophrenia. This is surprising in view of the central theoretical significance of the concept of identification. The present author would like to see replication of this study, replication involving not only the presently used measurement techniques but other methods of measuring parental identification, e.g., the semantic differential. It would be valuable to compare measurements based on the subject's perceptions, as done in this study, with those based on a combination of the subject's responses and those of the identification model directly. It would be equally valuable to compare the results from schizophrenic populations with those of other populations such as depressives, neurotics, character disorders, etc. The relationship of other variables to measurements of parental identification should be explored, variables, for example, such as those that were controlled in the present study--age, education, socioeconomic class, etc. Much could be gained from studies involving complex designs relating parental identification to several independent variables, e.g., psychopathology and socioeconomic background.

2. The Q technique, in the present author's opinion, provides an excellent tool for the measurement of parental identification, a tool that offers considerable potential for not only this purpose but for many other kinds of investigations as well. As a tool for measuring parental identification, efforts to develop Q decks more sensitive to characteristics relevant to identification would be well worth while.

The development of structured Q decks may make it possible to isolate the parameters of identification more adequately. For example, Q decks designed to tap characteristics relevant to Freud's id, ego, superego triad may demonstrate significant differences between divergent populations of subjects. Unstructured decks could be developed by trial and error that would be particularly sensitive to differences in parental identification between different populations, e.g., between reactive and process schizophrenics. The same general idea, of course, applies to differences in personality characteristics between self descriptions and descriptions of relevant others. Differences between various populations in perception of cultural roles could be investigated, e.g., the "masculine" and "feminine" roles. Reflection on the possibilities here seem endless.

3. Correlational analysis of the present data has turned up some tentative but interesting relationships between parental variables (in this case parental identification) and cognitive functions. Reference to the literature makes it apparent that this area is relatively unexplored as yet. Further investigation of relationships between parental identification and verbal abstracting ability, and differences between populations in regard to these relationships, would hopefully provide considerable insight into the developmental process. The investigation of other parental variables and their relationship to various cognitive variables should add considerably to present understanding of ego development.

4. Finally, future studies should take into account the lack of homogeneity of the schizophrenic population that has been amply demonstrated. The reactive-process dimension is one promising move in this direction. Others should be eagerly sought.

SUMMARY

This study was designed to investigate parental identification patterns in matched samples of normal subjects, reactive schizophrenics, and process schizophrenics. It was hypothesized that significant differences would exist among these three groups on measures of mother identification, ideal-mother identification, father identification, ideal-father identification, and several measures of parental identification direction and discrepancy. It was also hypothesized that differences would exist between the three groups studied in regard to personality traits attributed to self, ideal self, mother, and father. Finally, it was hypothesized that differences would exist between the three groups in verbal abstracting ability. The results of the experimental procedures were as follows:

1. Highly significant differences were found between schizophrenics and normals on measures of father and ideal-father identification. Both reactive and process schizophrenics demonstrated significantly less father and ideal-father identification than did normal subjects.
2. No significant differences were found between the three groups on measures of mother and ideal-mother identification.
3. Highly significant differences were found between schizophrenics and normals on measures of parental and ideal-parental identification discrepancy. Both reactive and process schizophrenics demonstrated significantly greater parental and ideal-parental identification

discrepancy than did normal subjects.

4. No significant differences were found between the three groups on measures of direction of parental identification.

5. Item analysis of the separate Q-sorts disclosed the following number of items that significantly differentiated between the three groups: ten items of the mother sort, 23 items of the father sort, 15 items of the self sort, and nine items of the ideal-self sort.

6. Highly significant differences were found between the three groups on the measures of verbal abstracting ability. The abstracting ability of the process schizophrenics was found to be significantly inferior to that of reactive schizophrenics and normal subjects. The abstracting ability of the reactive schizophrenics was found to be significantly better than that of the process schizophrenics but still significantly inferior to that of the normal subjects.

These findings were discussed in terms of their relevance to current knowledge and theory of family background and parental identification in schizophrenia.

APPENDIX 1

Phillips Prognostic Scale

I. PRE-MORBID HISTORY

A. Recent Sexual Adjustment

1. Stable heterosexual relation and marriage.....0
2. Continued heterosexual relation and marriage but unable to establish home.....1
3. Continued heterosexual relation and marriage broken by permanent separation.....2
4. (a) Continued heterosexual relation and marriage but with low sexual drive.....3
- (b) Continued heterosexual relation with deep emotional meaning but emotionally unable to develop it into marriage.....3
5. (a) Casual but continued heterosexual relations, i.e., "affairs," but nothing more.....4
- (b) Homosexual contacts with lack of or chronic failure in heterosexual experiences.....4
6. (a) Occasional casual heterosexual or homosexual experience with no deep emotional bond.....5
- (b) Solitary masturbation with no active attempt at homosexual or heterosexual experiences.....5
7. No sexual interest in either men or women.....6

B. Social Aspects of Sexual Life During Adolescence and Immediately Beyond

1. Always showed a healthy interest in girls with a steady girl friend during adolescence.....0
2. Started taking girls out regularly in adolescence.....1
3. Always mixed closely with boys and girls.....2
4. Consistent deep interest in male attachments with restricted or no interest in girls.....3
5. (a) Casual male attachments with inadequate attempts at adjustment to going out with girls.....4
- (b) Casual contacts with boys and girls.....4
6. (a) Casual contacts with boys and with lack of interest in girls.....5
- (b) Occasional contacts with girls.....5

7. No desire to be with boys and girls;
never went out with girls.....6

C. Social Aspects of Recent Sexual Life: 30 years of Age and Above

1. Married and has children, living as a family unit.....0
2. Married and has children but unable to establish
or maintain a family home.....1
3. Has been married and had children but permanently
separated.....2
4. (a) Married but considerable marital discord.....3
(b) Single, but has had engagement or deep heterosexual
relationship but emotionally unable to carry it
through to marriage.....3
5. Single, with short engagements or relationships with
women which do not appear to have had much emotional
depth for both partners, i.e., "affairs".....4
6. (a) Single, has gone out with a few girls but without
other indications of a continuous interest in
women.....5
(b) Single, consistent deep interest in male
attachments, no interest in women.....5
7. (a) Single, occasional male contacts, no interest
in women.....6
(b) Single, interested in neither men nor women.....6

D. Social Aspects of Recent Sexual Life: Before 30 years of Age

1. Married living as family unit, with or without children...0
2. (a) Married, with or without children, but unable to
establish or maintain a family home.....1
(b) Single but engaged or in a deep heterosexual
relationship (presumably leading toward marriage)....1
3. Single, has had engagement or deep heterosexual
relationship but has emotionally been unable to
carry it through to marriage.....2
4. Single, consistent deep interest in male attachments,
with restricted or lack of interest in women.....3
5. Single, casual male relationships with restricted
or lack of interest in women.....4
6. Single, has gone out with a few girls casually but
without other indications of a continuous interest
in women.....5
7. (a) Single, never interested in or never associated
with either men or women.....6
(b) Antisocial.....6

E. Personal Relations History

1. Always has had a number of close friends
but not habitually playing a leading role.....1
2. From adolescence on had a few close friends.....3
3. From adolescence on had a few casual friends.....3
4. From adolescence on stopped having friends.....4
5. (a) No intimate friends after childhood.....5
(b) Casual but never any deep intimate mutual
friendships.....5
6. Never worried about boys or girls; no desire
to be with boys and girls.....6

F. Recent Premorbid Adjustment in Personal Relations

1. Habitually mixed with others, but not a leader.....1
2. Mixed only with a close friend or group of friends.....3
3. No close friends; very few friends; had friends
but never quite accepted by them.....4
4. Quiet; aloof; seclusive; preferred to be by self.....5
5. Antisocial.....6

APPENDIX 2:

The Q-sort Items

1. absent-minded
2. puts on an act
3. ambitious
4. accepts others
5. bossy
6. calm
7. cautious
8. complaining
9. confident
10. considerate
11. cooperative
12. cruel, mean
13. demanding
14. dependent on others
15. can be depended upon
16. never satisfied
17. emotional
18. dull
19. easily embarrassed
20. easily hurt
21. lots of energy
22. fair, just
23. feminine, womanly
24. frank, straightforward
25. friendly
26. easily angered
27. helpless
28. always angry
29. devoted
30. uses imagination
31. acts before thinking
32. smart
33. helpful
34. good natured
35. jealous
36. lazy
37. likable
38. keeps at it
39. generous
40. disorganized
41. rebels against authority
42. doesn't do things according to the rules.
43. punishes others
44. restless
45. must always be right
46. religious
47. self-controlled
48. not much will power
49. selfish
50. self-pitying
51. sense of humor
52. self-centered, conceited
53. clever
54. sincere
55. strict
56. stubborn
57. doesn't trust others
58. gives in to others easily
59. understanding
60. irritable
61. encourages others
62. loving
63. confused
64. unhappy
65. cool toward others
66. criticizes others
67. warm-hearted
68. quiet
69. worried
70. has wisdom

APPENDIX 3

Centers' Occupational Index

1. Large business Includes bankers, manufacturers, large department store owners and managers, etc.
2. Professional Includes physicians, dentists, professors, teachers, ministers, engineers, lawyers, etc.
3. Small business Includes small retail dealers, contractors, proprietors of repair shops employing others, etc. Includes both owners and includes clerks or managers.
4. White-collar workers Includes clerks and kindred workers, salesman, agents, semi-professional workers, technicians, etc.
5. Farm owners and managers Includes any person who owns or manages a farm, ranch, grove, etc.
6. Skilled workers and foremen Includes carpenters, machinists, plumbers, masons, printers, etc. Includes foremen. Also barbers, cooks.
7. Farm tenants Includes all farm tenants and sharecroppers.
8. Semi-skilled workers Includes truck drivers, machine operators, service station attendants, waiters, countermen, etc.
9. Unskilled workers and farm laborers Street cleaners, construction laborers, and all non-owning, non-renting farm workers except those who work on their own father's farm, etc.

APPENDIX 4

The Benjamin Proverbs

1. When the cat's away, the mice will play.
2. Don't cry over spilt milk.
3. It never rains but it pours.
4. The burnt child dreads the fire.
5. Don't cross your bridges till you come to them.
6. A rolling stone gathers no moss.
7. Discretion is the better part of valor.
8. To fiddle while Rome burns.
9. The proof of the pudding is in the eating.
10. He who laughs last, laughs best.
11. New brooms sweep clean.
12. Ingratitude, thy name is woman.
13. He travels safest who travels alone.

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