

CIRCUMPLEX MODEL OF
MARITAL AND FAMILY SYSTEMS:
EMPIRICAL TEST WITH
FAMILIES OF DELINQUENT AND
NON-DELINQUENT ADOLESCENT BOYS

by

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CHAPTER I:

INTRODUCTION

The Purpose of This Study

During the past several decades, there has been a tendency for investigators in the area of juvenile delinquency to gradually move from viewing the delinquent as an individual with specific traits, to recognizing him as an individual, interacting and transacting within a broader context (Glueck, 1950; Glueck & Glueck, 1962). This broader context has generally been viewed through a systems approach by broadening the focus to include the delinquent's family, peers, and social environment (Mays, 1972; Hirsch, 1969). Many recent investigators have focused on delinquency as a potential result of family pathology. By identifying certain patterns of interaction, investigators have been able to distinguish families of delinquents from "control" families (Lewis et. al. 1976; Hetherington, Stowie, and Ridgert, 1971; Peterson and Becker, 1965).

The purpose of this study is to further explore the importance of the relationship between delinquents and their families. The concern is not with the individual, as such, but with the mechanisms within the family system which may sustain delinquent behavior. There is not any intention to claim that family interaction variables account for 100% of the variance in delinquency. However, as the following

literature review suggests, relationship dynamics within the family may explain at least a significant portion of that variance.

The literature review on delinquency within the family context is presented and organized around two basic dimensions which Olson, Sprenkle, and Russell (1979) identify as family cohesion and family adaptability. These investigators found it possible to place most of the concepts which appeared repeatedly in the family therapy, family sociology and small group literature on a continuum of these two dimensions. In an effort to integrate concepts from these various fields, the author found that certain family types could be identified if these two dimensions were placed horizontally and vertically on an orthogonal axis, which formed their "Circumplex Model of Marital and Family Systems" (Olson, Sprenkle and Russell, 1979). The model was specifically derived from a review of the literature on clinic versus non-clinic families and serves to summarize and organize that literature in a fashion which highlights salient features of functional and dysfunctional family styles. Efforts are now being made to empirically validate this Circumplex Model of Marital and Family Systems. As the model organized prior findings, new hypotheses, which have implications for family intervention, are now being suggested.

A description and discussion of this Circumplex Model and the two dimensions of family cohesion and family adaptability, as well as their respective sub-components, are presented. This study presents testable hypotheses involving

a group of delinquent adolescent boys and their families and a comparable control group of non-delinquent adolescent boys and their families. This study obtains both subjective and objective data, through the utilization of a self report instrument and an observable behavioral task. These efforts in the empirical testing and validation of this model may help "bridge the gaps that often exist among theorists, researchers, and practitioners" (Olson, 1976, p. 565).

Review of the Literature on Juvenile Delinquency in the Family Context

The present trend among many practitioners is to view delinquency within the family context (Hutzler, 1978; Janeksela, 1979). Efforts have been made to broaden the field of investigation, with a change of focus from viewing the delinquent as an isolated entity to a view of the delinquent and his family as an integral unit. This family unit is viewed as an interacting and transacting system (Gruher, 1979). Specific attention is given to the mechanisms within the family, which may sustain delinquent behavior (Jones, 1978; Norland, 1979).

Some rather obvious characteristics of delinquents and their families appear with some regularity throughout the literature. In one short-term longitudinal study, families of schizophrenics and families of delinquents were compared with "normal" families (Stabenue, Tupin, Werner, and Pollin, 1965). These investigators studied thirty-five families over a period of five years. They reported their results, which

had been obtained through the use of three techniques: The Revealed Differences Test, The Object Sorting Test, and The Thematic Apperception Test. From this data, combined with clinical observations, they were able to define some characteristics which were found to be significant in differentiating among the three groups of families. These investigators discovered that, in the area of family organization and role stability, families of delinquents were found to be very unstable with shifting competition for the assumption of roles. Family roles were determined in three basic ways: 1) family organizational pattern, 2) role stability, and 3) parental complementarity. There was no accountable leadership by father and mother, and the family interaction was often characterized by open conflict among its members. Members were found to be measurably self-centered, thus allowing for members to focus more on themselves and less on other family members. Furthermore, undercontrol within the family organization and the teasing manipulation by other family members were also indicative of families with a delinquent member. Each of these characteristics separated the families of delinquents from the schizophrenic and normal families. Rapidly shifting rules and a lack of leadership suggest a "chaotic" family style. The individual self-focus suggests a degree of disengagement. It seems that Stabenau and his associates were basically describing the delinquent's families as engaging in a "chaotically disengaged" family style.

The lack of clarity in role-taking by family members served to allow families of delinquents to continually change the rules within the family. This rule-shifting has also been observed by practitioners who work with families of delinquents. Johnson (1975) reported similar characteristics from his experiences in working with hundreds of families as the Director of the Family Intervention Services in a Juvenile Court in Pennsylvania. He identified families of delinquents by the way they were organized. Johnson observed that these families of delinquents were either unable or uninterested in setting rules for family members to abide. He contends that, for these families, "The basic rule is that there shall be no rules." (1975, p. 32). These families were observed as typically spending time in discussing rules. However, no rules were ever agreed upon. Any efforts by a practitioner to impose rules or restrictions set in motion a variety of mechanisms which served to maintain the chaotic nature of the household. The article was not clear as to how these mechanisms manifested themselves. However, it was clearly indicated that the lack of established rules enhanced conflict between members and provided inconsistent responses to certain behaviors. The only consistency was to be continually inconsistent in regards to the formation of rules. This situation of inconsistent rule making and enhanced conflict suggests that these families were utilizing a "chaotic" style of family functioning.

Further investigations of family interaction variables as related to juvenile delinquency revealed similar findings (Hetherington, Stowie, Ridberg, 1971). Utilizing the Structured Family Interaction Task (SFIT) for boys and girls, and the Stanford Parent Questionnaire (SPQ) for boys and girls, these investigators found that the mothers and fathers of non-delinquents assumed a complimentary and consistant role in child rearing. This role allowed parents to adapt to unexpected situation with some regularity, thus avoiding an authoritarian stance and unreasoning obedience to parental authority. The non-delinquent parents displayed warmth and enhanced the positive self-concepts of their children. In other words, these parents were close to their children, but still allowed their adolescents enough autonomy to enhance their own identities and self-concepts. This was in sharp contrast to the parents of the delinquents, who were found to be hostile and rejecting of their children. These parents were considered very rigid and hostile in disciplining their children. The rejection and hostility served to keep these children separate and disengaged from the family as a whole.

Similar conditions of hostility, conflict, and rejection were found in assessing moral judgement and moral interactions in delinquent and non-delinquent families. This assessment was determined by the administration of Kohlberg's structured moral dilemmas to eight delinquent adolescents and their mothers (Jurkovic, and Prentice, 1974). Among other results,

it was of interest to note that delinquents experienced almost twice the level of conflict and hostility in their homes and about one-half of the level of encouragement and warmth, as opposed to the families of non-delinquents. Perceived feelings of neglect and rejection by delinquents were also confirmed by the administration of the Parent-Child Relations questionnaire to 30 delinquent boys and a matched group of non-delinquents perceived parents as being more protective, loving, and less demanding. Again, these studies would appear to place the families of delinquents toward the extreme of the cohesion dimension toward low family "connectedness".

The extremely high level of separation between family members in delinquent households is further suggested by a study in which Kinetic Family Drawings were used to discriminate adolescent male delinquents from a non-clinic population. The interpretation of drawings from 20 male delinquents and 20 male non-delinquents revealed that delinquent adolescents tended to omit most, if not all, of their family members in the drawings. These omissions were interpreted as alienation, hostility, and low cohesion between the delinquent and other family members, especially the parents (Sobel and Sobel, 1976).

In other types of juvenile delinquency, similar family conditions are noted. For example, a study in California which focused on 31 juveniles charges with homicide or attempted homicide revealed that the majority of their families fell into three main categories (Sorrells, 1977). These

categories were (1) violent, quarrelsome, argumentive, (2) unstable and chaotic, and (3) no control over the children. The data reported by Sorrells was "soft", lacking systematic and objective measures. Most of the data collected was obtained through social histories or social worker's and probation officer's investigations. No control group was utilized. However, it is interesting that the terms they chose to describe their findings are indicative of the terms utilized by the cohesion and adaptability dimensions.

The locus of control and the alienation of delinquents from their parents was demonstrated by testing a delinquent population of adolescent females and a matched group of non-delinquent females (Duke and Fenhagen, 1975). The external locus of control may not be as imperative as the responses relating to interpersonal distance, which was assessed with the Comfortable Interpersonal Distance Scale (CID). Correlations between real life distancing and CID responses ranged from .60 to .88. Delinquent girls showed greater distancing of parent figures than non-delinquents at a ratio of nearly four to one. The data collected by utilizing the CID may help to substantiate the notion that delinquents, more specifically delinquent females, maintain a rather consistent level of interpersonal distance between themselves and their parents. This distancing or degree of closeness between these delinquent adolescent females and their parents may be looked

upon as an indicator of the level of cohesion between delinquent females and their parents.

Similar variables appeared in a study performed some time ago, which examined parent-child relationships and delinquency (Cass, 1952). Dr. Cass isolated several variables in parent-child relationships, among which were parental control and parental awareness of their children in specific areas. The technique devised for measuring these variables included a Check-List Questionnaire, Control Questionnaire, and an Imcomplete Sentence Test. Unlike most questionnaire techniques, the meaning of the data was sought, not in the responses themselves, but in the degree of similarity on questionnaires answered by mothers and their adolescent sons and daughters. These techniques were used with a group of delinquents and their mothers and a group of non-delinquents and their mothers, paired individually according to age, sex, race, and father's occupational level. Among several hypotheses, this study contended that low maternal awareness and high maternal control should be associated with delinquent behavior, while high awareness and low control should be associated with better social adjustment. The delinquents and non-delinquents were clearly differentiated by examining these variables. Mothers, who showed a high level of awareness towards their son or daughter, tended to utilize less control. Conflictual spousal relationships, low parental awareness of child, and high attempts at control were associated with families of delinquents. While the first two

criteria clearly place the delinquent group towards the extreme of low cohesion, the high control finding suggests low (rigidity) rather than extremely high adaptability (chaos). It is possible, however, that Cass's self-report instrument taps attempts at control, without distinguishing successful from unsuccessful attempts. It is possible that the control scores were high because a high proportion of unsuccessful control attempts could be experienced as chaotic. From the data presented by Cass, it is impossible to tell if this interpretation should be favored.

Correlational studies, which report on styles of parental discipline, also seem to be consistent with the Olson, Sprenkle, and Russell (1979) model. For example, a more recent analysis of a study of 650 juveniles, which has begun in 1937 and terminated in 1945, found that delinquency was quite uncommon, even among the sons of criminals, as long as the fathers were consistent in discipline of their children (McCord, McCord, and Zola, 1959).

In this same study, father and mother types were categorized by a team of judges which examined information on each parent's personality. Their findings served as indicators of family cohesion and adaptability in both high and low offending juveniles. Where fathers are rejecting, cruel, neglecting, and inconsistent, the chances of delinquency were very great. The McCords found that 85% of the juveniles that had been studied in between 1937 and 1945 were reared under

cruel or neglecting conditions and had been convicted of at least one crime. Where mothers were deviant, inconsistent and non-loving, the crime rate was nearly as high-- 81% (McCord, McCord, and Zola, 1959).

Variables similar to cohesion and adaptability, have been explored in an attempt to develop a short and reliable scale for assessing parental behavior. In a conceptual model with two orthogonal dimensions of love versus hostility and autonomy versus control, Schaefer (1965) revealed several dramatic differences between a delinquent population and a similar non-delinquent population. Subjects were all from unbroken homes and were matched in accordance to age, sex, and occupations of fathers. A ten-item scale was developed for each of the twenty-six sub-components of warmth and control. Although the two groups in this study were not entirely matched on variables which may reveal specific differences between delinquents and non-delinquents, it appeared that the discriminative power of the scales was in congruence with the previously discussed literature. For example, delinquents described both their fathers and mothers as higher on extreme autonomy (separateness) and lax on discipline (chaos). Correlations between the perceptions of mother and father tended to establish that the parental coalition in the delinquent families was less unified and weaker. There is indication of chaos within the household due to lack of coordinated and consistent policy on behalf

of the parent's behavior with their children. The results tended to substantiate the notion that delinquents view their parents as being somewhat rejecting and autonomous, with lax discipline and a high level of control through guilt. This is consistent with the literature which found that delinquents perceive very little cohesion between family members and perceive a somewhat chaotic household, based on perceived discipline irregularities and inconsistencies.

Disciplinary attitudes of parents were also found to relate to the incidence of delinquency in a study reported by Glueck and Glueck (1950). Nearly twice as many fathers of delinquents, as compared with non-clinic fathers, were erratic and lax in their disciplinary attitudes. Three times as many fathers of delinquent children, as compared with non-clinic children, were also considered to be over-strict. This would suggest that families of delinquents may be found at both extremes of the adaptability dimension either chaotic or rigid.

The foregoing literature review appears to substantiate the notion that families of delinquents may be very low on cohesion. However, one study involving an examination of adolescents from both urban and rural areas supports the notion that other variables may account for variance when locating families on the cohesion dimension. Picou (1976) found that peer group associations were more stable in rural areas than in urban areas. In addition, parents in rural

areas perceived their adolescent sons as being much more closer to the family, while the adolescent perceived himself as being separate from the family. This idea of cultural variations, i.e. rural versus urban, individual perceptions and role stability may account for radical shifts on the cohesion dimension.

In regards to the adaptability dimension, it appears unclear exactly where these family types are located. The Glueck and Glueck (1950) study is consistent with the dichotomy found in most of the other studies with reference to the degree of flexibility within these families. It appears evident that these families are on the extreme of the adaptability dimension; that they are either very rigid or very chaotic in their styles of family functioning.

The literature does suggest that one might expect families with a delinquent adolescent member to be disengaged on the cohesion dimension and either extremely rigid or chaotic on the adaptability dimension. The objective here is not to focus on the delinquent as an individual member, but on the mechanisms of interaction within the family system which may enhance or sustain delinquent behavior. This is not to be confused with a linear conception of causality, but is more akin to the dynamics of circular causality (Waltzawick, Beavin, and Jackson, 1967; Buckley, 1967).

Linear causality assumes that there is a progressive chain of causality in which one could speak in terms on the beginning and the end of the causal chain. This chain of events is really meaningless in a system incorporating feedback loops, since the behavior of the delinquent effects and is effected by the behavior of their parents. Their interaction pattern is actually circular in nature instead of linear. This concept is referred to as circular causality.

What follows is a description and discussion of the Circumplex Model of Marital and Family Systems in which styles of family functioning are described as the primary processes in the family system along the dimension of adaptability and cohesion. The potential utility for using the Circumplex Model to understand families with a delinquent adolescent will be examined.

Circumplex Model of Marital and Family Systems

Family Cohesion Dimension

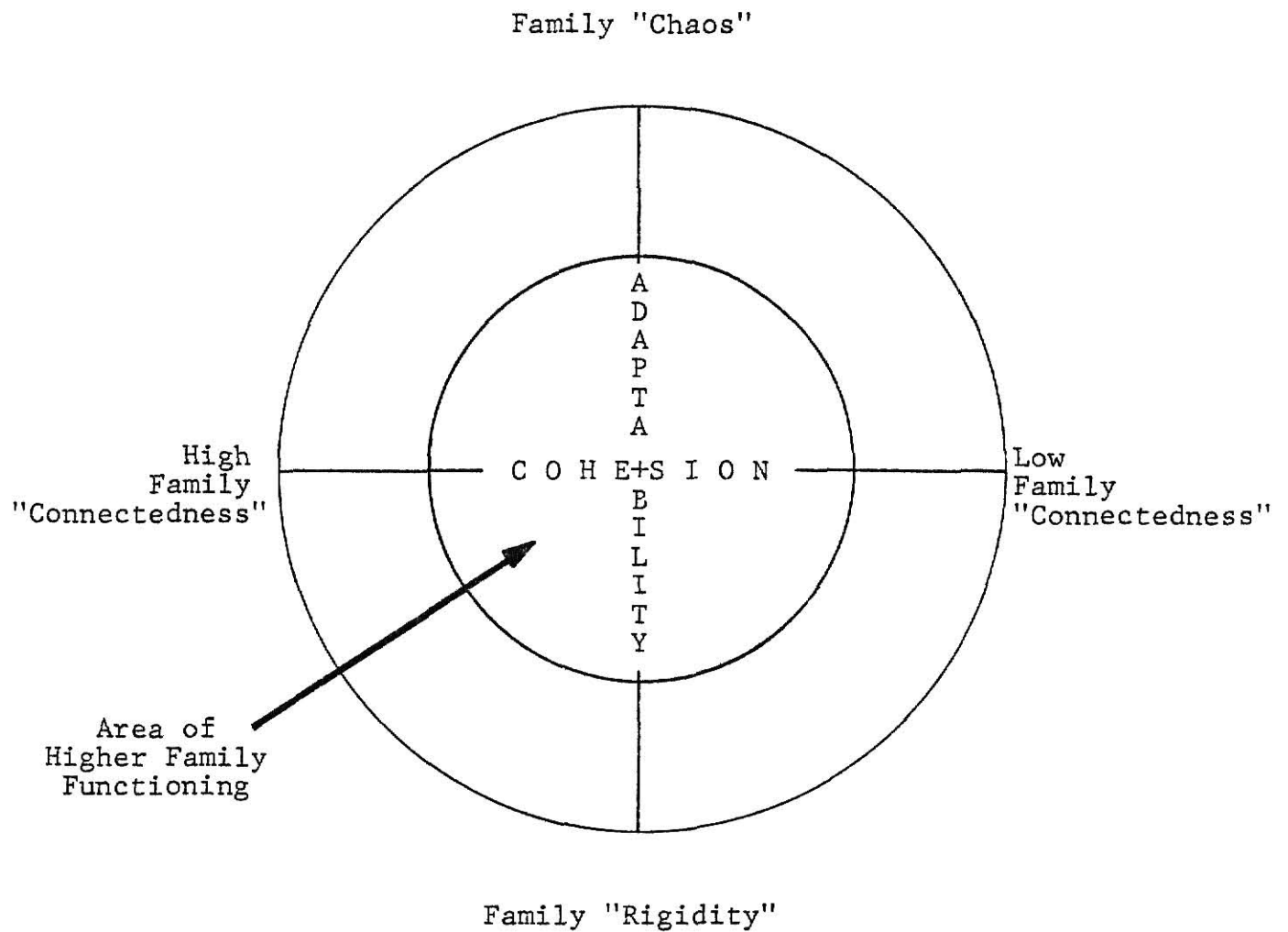
Family cohesion is defined as the degree of "emotional bonding" which members have toward one another and the individual autonomy that a person has in the family system (Olson, Sprenkle and Russell, 1979). There are two primary components to this definition of family cohesion. First, is the degree of emotional bonding between individual family members; and

secondly, is the level of autonomy an individual has in the family system. The extreme of high family cohesion is characterized by an over-identification with the family thus facilitating extreme bonding and limiting individual autonomy. Conversely, very low family cohesion serves to separate members and thus allows for very high autonomy. It is suggested that the mid-range area (see Figure I) of cohesion allows families to most effectively deal with situational stress and developmental change (Olson, Sprenkle and Russell, 1979).

Olson, Sprenkle, and Russell (1979) suggest that there is a centripetal force which pulls members toward one another into an intellectual and emotional "oneness". This tendency to draw members toward one another is juxtaposed by a centrifugal force referred to as individual autonomy. These two opposing forces are represented by the cohesion dimension which is the horizontal axis of the Circumplex Model (see Figure I).

The symbolizing of family transactions as centrifugal versus centripetal forces originated with Helm Stierlin (1974). Stierlin was primarily interested in the separation process between parents and adolescents. However, his terms are helpful in explaining the balancing effect between the two mechanisms. For example, family members are bound together either emotionally, physically or both by centripetal mechanisms.

Figure I: Circumplex Model



Centrifugal mechanisms serve to pull members apart from one another, thus enhancing individual autonomy. This balance between bonding together and individual autonomy is akin to Hess and Handel's (1959) illustrations of "separateness" and "connectedness".

The range of possibilities along the "connectedness" or cohesion dimension is wide. One pathological extreme on this dimension, such as extreme "connectedness", has been viewed as one predisposing factor in the development of schizophrenia (e.g., Wynne et. al., 1958). The other extreme of "separateness" may be the autistic child (Cohen, Caparulo and Shaywitz, 1976).

It is experience with extreme clinic populations that initially drew attention to this dimension. Many descriptions of clinic families suggests that the clinicians were noting patterns which were very similar to the shared delusional experience described in Fleck and Lidz (1958), Bowen's (1966) description of the "undifferentiated family ego mass", the extraordinary mutual "involvement" noted by Scott and Askworth (1967), and Wynn's (1958) description of "pseudomutuality" and the "rubber fence" which surrounds schizophrenic family members. Many of these clinically derived concepts lack empirical research to either support or refute. Nevertheless, they are common concepts used by clinicians in describing certain family pathologies.

Family pathology and styles of family problem-solving

have been linked together by David Reiss (1971). By using a card-sort procedure, Reiss was able to distinguish among three types of families: normal, schizophrenic and delinquent. Normal families in his sample allowed individual members exploration before coming to a consensus ("environment-sensitive families"), whereas schizophrenic families rapidly came to share a distorted view of the environment, omitting exploration of alternatives (consensus-sensitive families"). Delinquent families frequently failed to come to a consensus at all ("interpersonal-distance-sensitive families"). The unwillingness of these families to come to a consensus may suggest a high level of isolation and interpersonal distance in delinquent families.

Nine indicators of the levels of "separateness" and "connectedness" within the family cohesion are listed in Table I. Descriptive conditions for each of the nine indicators are listed under the four headings of either disengaged, separated, connected or enmeshed families.

Table 1: FAMILY COHESION DIMENSION: INTER-RELATED CONCEPTS

EMOTIONAL BONDING	DISENGAGED (Very Low)	SEPARATED (Low to Moderate)	CONNECTED (Moderate to High)	ENMESHED (Very High)
Independence	High independence of family members.	Moderate independence of family members.	Moderate dependence of family members.	High Dependence of family members.
Family Boundaries	Open external boundaries. Closed internal boundaries. Rigid generational boundaries.	Semi-open external and internal boundaries. Clear generational boundaries.	Semi-open external boundaries. Open internal boundaries. Clear generational boundaries.	Closed External boundaries. Blurred internal boundaries. Blurred generational boundaries.
Coalitions	Weak coalitions, usually a family scapegoat.	Marital coalition clear.	Marital coalition strong.	Parent-child coalitions.
Time	Time apart from family maximized (physically and/or or emotionally).	Time alone and together is important.	Time together is important. Time alone permitted for approved reason.	Time together maximized. Little time alone permitted.
Space	Separate space both physically and emotionally is maximized.	Private space maintained; some family space.	Family space maximized. Private space minimized.	Little or no private space at home.
Friends	Mainly individual friends seen alone. Few family friends.	Some individual friends. Some family friends.	Some individual friends. Scheduled activities with couple and family friends.	Limited individual friends. Mainly couple or family friends seen together.
Decision Making	Primarily individual decisions.	Most decisions are individually based, able to make joint decisions on family issues.	Individual decisions are shared. Most decisions made with family in mind.	All decisions, but personal and relationship must be made by family.
Interests and Recreation	Primarily individual activities done without family. Family not involved.	Some spontaneous family activities. Individual activities supported.	Some scheduled family activities. Family involved in individual interests.	Most or all activities and interests must be shared with family.

Family Adaptability Dimension

Adaptability is defined as "the ability of a marital/family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress, (Olson, Sprenkle, and Russell, 1979). It is these authors' assumption that, for a family to address such situational or developmental change as death of a family member, adjustment to retirement, the stress associated with adolescents striving for autonomy, changing cultural norms, etc.; it is necessary to allow for some adaptability within the family system. Their assumption is that an adaptive system requires both positive and negative feedback. Positive feedback allows a system to elaborate, change, innovate, and create. This process is referred to as morphogenesis (Buckley, 1967). Conversely, negative feedback has the effect of maintaining the status quo or system morphostasis (Buckley, 1967). Thus, positive and negative feedback are conceptualized as mechanisms facilitating adaptability.

The extremes on the adaptability dimension are chaos, at the high end, and rigidity, at the low end (see Figure I). Chaotic family structures are considered to have an extremely high level of adaptability (extreme morphostasis). The stability of a family system is maintained by both morphogenic (change) and morphostatic (stability) processes

(Buckley, 1967; Speer, 1970). Morphostatis allows for a somewhat predictable pattern of rules to govern family relationships while morphogenesis allows for enough change to successfully cope with the challenges of stress and developmental tasks. Therefore, dysfunctional family systems are expected to fall at either extreme of these indicators, while functional families are likely to maintain a balance between the two extremes of morphogenesis and morphostasis. It is assumed that both too much change (chaos) and too little change (rigidity) are problematic.

A review of the literature reveals that Tallman (1961) and Kieren and Tallman (1972) used a conceptualization of "adaptability" as a framework for evaluating both spousal and parental competency. They found that, in order to effectively deal with a problematic situation, changes in roles and strategies were necessary to cope with new and modified assessments of the situation. Moderate change allowed for necessary adjustments while, at the same time, allowing for some continuity.

The empirical research, relative to the adaptability dimension, is primarily found in laboratory studies. In general, these researchers have found clinic families to maintain interaction patterns more rigidly than non-clinic families. The "normal" families were more adaptive to situations, but not so flexible as to be chaotic. Many investigations exploring this variable used equal and un-

equal participation or patterns of participation by family members as a procedure to measure adaptability. (Haley, 1964; Haley, 1967; Winter and Ferreira, 1967).

The observation of clinicians, though not always empirically investigated, indicated that, when disturbed families are forced to change their patterns of relating, they often change radically. This radical shift in relating to one another may lead to chaos. Within a short time, the chaotic pattern becomes intolerable. Thus, the family reverts to the past symptomatic behavior. The disturbed behavior again becomes rigidly maintained. The oscillation between the extremes of rigidity and chaos may distinguish the disturbed from the non-disturbed family.

Some specific variables within the adaptability dimension are provided under three main categories of this dimension. Descriptive conditions for each of these variables are listed under the category of either chaotic, flexible, structured, or rigid families (see Table II).

The dimension of adaptability is presented with the use of four main categories. Descriptive conditions for each sub-category is listed under the categories of chaotic, flexible, structured, and rigid family styles.

Table 2: FAMILY ADAPTABILITY DIMENSIONS: INTER-RELATED CONCEPTS

	<u>ASSERTIVENESS</u>	<u>CONTROL</u>	<u>DISCIPLINE</u>	<u>NEGOTIATION</u>	<u>ROLES</u>	<u>RULES</u>	<u>SYSTEM FEEDBACK</u>
<u>CHAOTIC</u> (Very High)	Passive and Aggressive Styles.	No leadership.	Laisses-faires Very lenient.	Endless negotiation. Poor problem solving.	Dramatic role shifts.	Dramatic rule shifts. Many implicit rules. Few explicit rules. Arbitrarily enforced rules.	Primarily positive loops.
<u>FLEXIBLE</u>	Generally Assertive.	Equalitarian with fluid changes.	Democratic; Unpredictable consequences.	Good negotiation; good problem solving.	Role making and sharing. Fluid change of roles.	Some rule changes. More implicit rules often enforced.	More positive than negative loops.
<u>STRUCTURED</u>	Generally Assertive.	Democratic with stable leader.	Democratic; Predictable consequences.	Structured negotiations good problem solving.	Some role sharing.	Few rule changes. More explicit than implicit rules. Rules usually enforced.	More negative than positive loops.
<u>RIGID</u>	Passive Aggressive Styles.	Authoritarian leadership.	Autocratic; Overly strict.	Limited negotiations; Poor problem solving.	Role rigidity; Stereotyped roles.	Rigid rules; Many explicit rules. Few implicit rules. Strictly enforced rules.	Primarily negative loops; few positive loops.

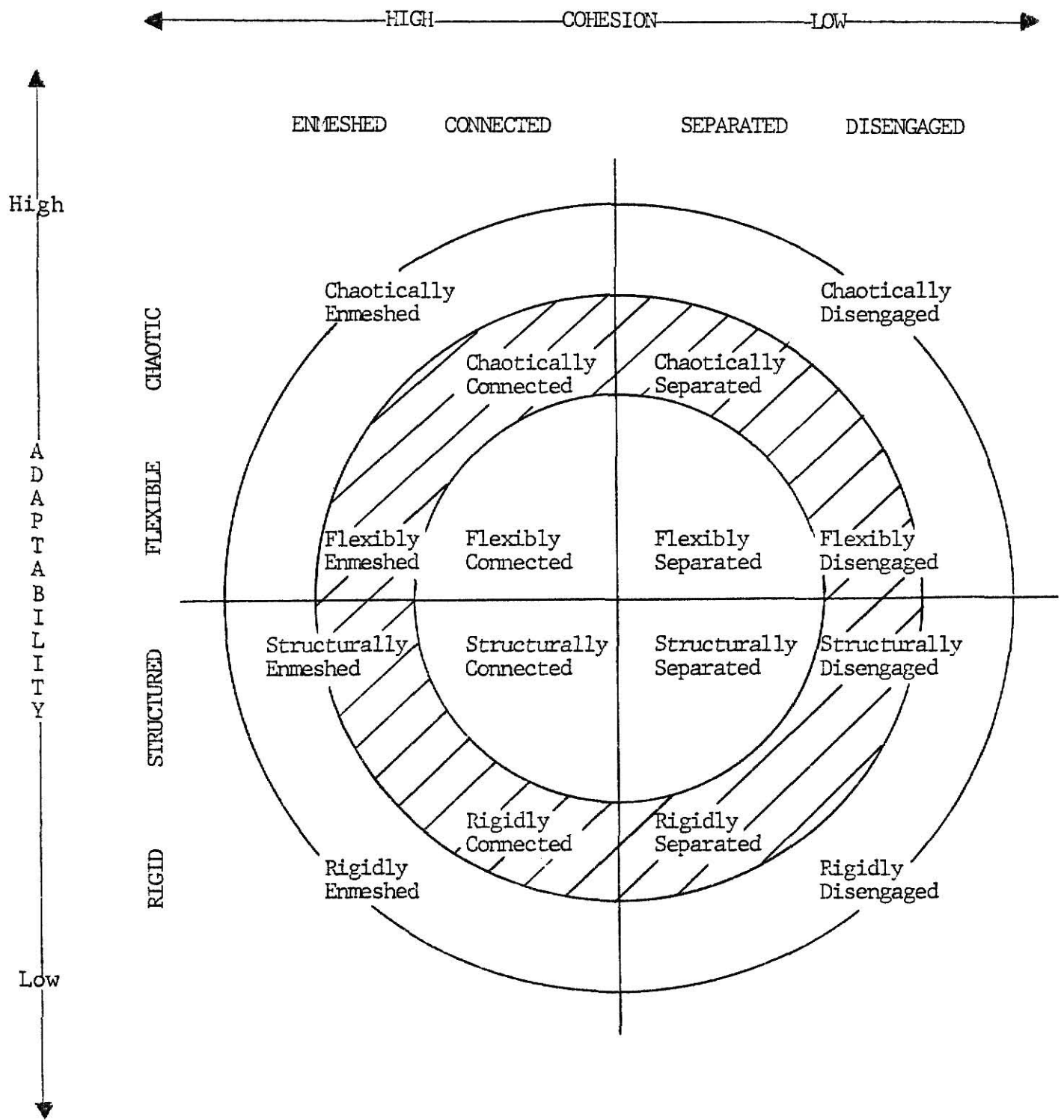
Types of Marital and Family Systems

There are sixteen family types identified by Olson, Sprenkle and Russell (1979) and classified within the Circumplex Model of Marital and Family Systems (see Figure II). Each type is labeled to highlight the level of cohesion and adaptability, while avoiding value-laden terminology. The focus is on the pattern of interaction, rather than the clinical label attached to a single family member. There are two descriptive terms for each type of family and each of the terms is related to levels of cohesion and adaptability, respectively. These terms are intended to describe the basic and underlying dynamics of a marital or family system.

The eight most common types of families are represented within the inner and outer circles of the Circumplex Model (see Figure II). The four types within the central circle reflect balanced levels of both adaptability and cohesion. These are considered to be the most functional for individual and family development. These four types within the center circle are labeled 1) "flexible separateness", 2) "flexible connectedness", 3) "structured connectedness" and 4) "structured separateness". The terms "flexible" and "structured" refer to the degree of allowed change on the adaptability dimension and the terms "separateness" and "connectedness" refer to the degree of balance on the cohesion dimension.

The four types within the outer circle represent the

Figure II: Circumplex Model with Family Types



extremes. They reflect very high and very low levels of adaptability and cohesion and are seen as dysfunctional to individual and family development. These four extreme and less functional types are labeled: 1) "chaotic disengagement", 2) "chaotic enmeshment", 3) "rigid enmeshment" and 4) "rigid disengagement". The terms "chaotic" and "rigid" refer to the extremes on the adaptability dimension, and terms "disengagement" and "enmeshment" refer to the extremes on the cohesion dimension (Minuchin, 1974).

The remaining eight types within the circle between the inner and outer circles (see Figure II) are further representations of family types. These additional eight types are not being utilized in this study. The focus of this study is on the moderate range within the inner circle and the extreme range located in the outer circle.

The model is considered to be dynamic in that it provides for changes in the family types over time. Changes in developmental and situational context may demand periodic shifts in family functioning. For example, the requirements on behalf of the family to meet the needs of infancy may vary considerably as their child grows into adolescence. A "structurally connected" family with an infant may find it necessary to gradually move toward a more "flexible connectedness" or "structured separateness" in order to meet the development demands at a later state in the life cycle.

The model assumes that families may move from one family type to another in meeting new situations, such as loss of a family member, birth of a child or changes in the external environment. However, it is also the author's contention that over a period of time, a pattern of relating will emerge into a predominant style. Families whose predominate style is "rigid enmeshment", "rigid disengagement", "choatic enmeshment" or "chaotic disengagement" are expected to be more likely to develop problems which could lead to a more dysfunctional family style. Traditionally, these more dysfunctional family styles have been clinically referred to with labels such as schizophrenia, delinquency, or depression, etc.

Several empirical investigations have been conducted which support certain components of the Circumplex Model. Sprenkle and Olson (1978) performed an empirical study utilizing clinic and non-clinic couples. By examining the interaction processes of twenty-five couples receiving marriage counseling and observing the same in a comparable control group, not receiving counseling, they were able to examine the variable of family adaptability. Utilizing the instrument, SIMFAM, they found a combination of high support and equalitarian leadership to be especially characteristic of non-clinic couples. These couples were also found to be significantly more creative, more supportive, and more

responsive to each other's attempts to influence each other than clinic couples.

In addition, Russell (1979) empirically investigated the variables of family cohesion, family adaptability and also the facilitative variables of support and creativity. Thirty-one Catholic family triads with daughters ranging in age from 14 to 17 years of age participated in the study which utilized SIMFAM and questionnaires designed to measure crucial variables in relation to the Circumplex Model. A multi-trait multi-method analysis of the data yielded some support of the model.

Hypotheses

The preceding literature review on delinquency within the family context suggests where these types of families may be located in the matrix created by the two major axes on the Circumplex Model of Marital and Family Systems. There is a strong indication from this review that delinquents share very little identification with the family group and appear to be striving for a rather separate position within the family. This would appear to place families of a delinquent at the extreme of the cohesion dimension towards low family "connectedness". However, there was limited evidence which also indicated that delinquents may "perceive" themselves as separate while at the same time the family tends to perceive them much closer. This may be a question of an individual's perception. Evidence is relatively clear, however, that delinquents will fall at either extreme of the cohesion dimension.

There is less evidence to suggest where these families should be located in reference to the adaptability dimension. However, the preceding literature review has documented the extremes of family "chaos" and family "rigidity" as being typical of these delinquent families. The preceding literature review suggests that rigid households may be very ineffective in regards to discipline and control. It was not clear in the studies reported as to the ratio of total control attempts to

successful attempts, which could be experienced as chaotic. At any rate, the evidence is inconclusive as to where families of delinquents should be located on the adaptability dimension. The evidence did indicate, however, that they were more likely be located toward the extremes of family "chaos" and family "rigidity".

The two measures referred in these hypotheses are the Family Adaptability Cohesion and Evaluation Scale (FACES I) and the Kveback (KFST) family sculpture task.

Hypotheses I: Families in which there is no delinquency will be less extreme in family adaptability?

a) Control family's self perceptions will indicate less extreme family adaptability as measured by FACES I.

Hypotheses II: Families in which there is no delinquency will be less extreme in family cohesion than the families of delinquents.

a) Control family's self-perceptions will indicate less extreme family coehsion as measured by the FACES I.

b) Control families will indicate less extreme family triad distance as measured by the KFST.

Operational Definitions

Several hypotheses have been stated in conceptual terms. The following provided operational definitions for the variables within each hypothesis:

Family:

The term family refers to three members; the father, mother, and adolescent son.

Delinquency:

The term delinquency has two major components. First, delinquency refers to the adolescent son who has had at least three contacts with law enforcement agencies involving the violation of a law. Secondly, this same adolescent must be under supervision of a local court or similar human service agency.

Family Cohesion (KFST):

This term "family cohesion", in relation to the measure KFST, shall be determined by the calculation of the family triad distance scores. The higher the distance score, the lower the family cohesion. Refer to Appendix "C" for information regarding the specifics in calculating this score.

Family Cohesion (FACES I):

The term "family cohesion", in relation to the measure FACES I shall be determined by the sum of the following

subscale scores: emotional bonding, independence, family boundaries, coalitions, time, space, friends, decision-making, interests, and recreation as calculated by FACES I. Refer to Appendix "B" for information regarding the specifics in calculating this score.

Family Adaptability (FACES I):

The term "family adaptability" in relation to the measure FACES I shall be determined by the summation of the scores on the following sub-scales: assertiveness, control, discipline, negotiation, roles, rules, and system feedback. Refer to Appendix "B" for information regarding the specifics in calculating this score.

CHAPTER II:
METHODOLOGY
Instruments

Precise scientific inquiry is made especially difficult by the very nature and complexity of family interactions. Problems of a family's willingness to expose information to an outsider; the tendency to keep the family a closed system; and the whole area of manifest versus latent content in messages are among the few obvious problems in family research (Framo, 1965; Kantor and Lehr, 1975). The almost overwhelming multiplicity of variables effecting family interactions serve to challenge the whole concept of scientific inquiry. However, family investigators are equally aware of distortions that can result from viewing or testing family members as individuals within a private context (Watzlawick, Beavin and Jackson, 1967; Nagy and Spart, 1973; Minuchin, 1974). Individual family members perceptions tend to represent only a small part of the total family picture. The way in which members interact with one another may present either a larger or even an entirely different picture than would be determined by viewing or testing the individual alone. The whole is more than the sum of its parts; and the whole is our focus here.

In order to make the complexity of interaction manageable, this investigator has chosen to utilize two measures which will allow for the collection of data on both the sub-

jective and objective processes operating within a family (Levinger, 1963).

The utilization of a pencil and paper measure, FACES I (Olson, Bell and Portner, 1978) allows for the collection of self-report data, which will serve as an indicator of the subjective orientation of each individual family member. Secondly, the utilization of a direct behavior measure, which involves the whole family, allows for the observation of patterns which individual family members may not be aware of or may not wish to report. The former provides an insider's perception of the family while the latter provides an outsider's perspective (Olson, 1978).

Sample Description and Selection Procedure

The sample population for this study was drawn from two basic groups of families. The Sarpy County Separate Juvenile Court, located in Papillion, Nebraska, agreed to participate in this project by allowing the investigator access to their 140 families with a juvenile boy on probation. With the help of probation officers, clinic families were chosen under the following criteria:

1. The delinquent adolescent must be a male with both parents married and residing in the home.
2. The adolescent must have had at least three contacts with law enforcement agencies involving the violation of a law.

3. This same adolescent must currently be under supervision by this Separate Juvenile Court.

The second group of families were procured through the County Extension Office in Papillion. These non-clinic families were considered as high functioning families with both parents married and residing in the home and their son having had no contacts with the local law enforcement agencies. In addition, these young people were known by at least two of the County Extension employees as being a high functioning, non-delinquent youth.

Each family, in both the clinic and non clinic groups, were contacted by phone and given a brief rational and description of the study. The researcher requested the family's confidential participation in this study (see Appendix "D"). If their response on the phone was affirmative, then a meeting time was arranged at the family member's home with the researcher and the father, mother, and adolescent son.

Approximately twenty per cent of the clinic families who were contacted volunteered to participate in the study. That is a rather sharp contrast to the non-clinic group, in which nearly all those contacted, volunteered to participate.

What follows is a description of each instrument used in this study, along with a brief explanation of the validity and reliability associated with each measure.

Family Adaptability and Cohesion Evaluation Scale (FACES I)

Olson, Bell, and Portner (1978) developed FACES I in an attempt to find a more adequate and systematic instrument to assess family cohesion and family adaptability. FACES I is a self-report scale composed of 111 items in which each item is answered on a four point scale (see Appendix "A"). It is the developers' contention that FACES I serves as a tool with which the therapist or researcher can objectively assess family cohesion and family adaptability. This assessment enables the clinician to locate a couple or family in the Circumplex Model. This diagnosis or classification highlights important patterns of interaction and helps to establish relevant therapeutic goals. In essence, this instrument is tailor-made for the two major dimensions and sub-components central to the Circumplex Model (see Tables I and II).

The family cohesion dimension is measured in relation to responses on questions related to nine concepts: emotional bonding, independence, family boundries, coalitions, time, space, friends, decision-making, interests, and recreation. Seven concepts related to family adaptability are also measured: assertiveness, control, discipline, negotiation, roles, rules, and system feedback. Each sub-scale has two items for the high, moderate and low levels of each concept. There are 54 cohesion items and 42 adaptability items. In

addition to the 96 cohesion and adaptability items, there is an additional version of the Edmonds Social Desirability Scale which provides 15 more items, totaling 111 in all. For information as to the scoring procedure for FACES I, see Appendix "B".

Validity and Reliability (FACES I)

All of the 111 items on the questionnaire demonstrated high factor loadings on the expected factors related to the two basic dimensions of family cohesion and family adaptability.

Evidence of content validity was provided by the utilization of 410 students in Family Relationship courses who answered each item based on their perceptions of their family of origin. In addition, thirty-five marriage and family counselors were asked to rate each item on a scale ranging from high, moderate, and low for each dimension. A high level of agreement was demonstrated by the counselor's ratings in their observation of the student's performance (Olson, Bell, Portner, 1978).

The evidence available on the reliability of FACES I is somewhat encouraging. Internal reliability of the adaptability and cohesion dimensions is .75 and .83 respectively. Olson (etal. 1979) further report on a split-half reliability of .49 for the cohesion dimension and .42 for the adaptability dimension.

Evidence of validity and reliability is presently being investigated and tested through research at the University of Minnesota under the direction of David Olson (Olson et al. 1979).

Kvebaek Family Sculpture Test

The Kvebaek Family Sculpture Test (KFST) is a behavioral measure utilizing a small chessboard - like playing surface and numerous figurines of various shapes and sizes. By playing the game, family members provide information regarding their relationships by sculpting certain arrangements on the chessboard using various chosen figurines.

The conceptualization of KFST is based in structural family therapy. In the past, various family sculpturing tests asked family members to arrange their bodies in such a way as to create a physical representation of their relationships at a given point in time. According to Papp, Silverstein and Carter (1973), this is more akin to a therapeutic art form in which each member symbolized their emotional relationship to one another. The notion of sculpting as a therapeutic intervention is relating both historically and in method to psychodrama and family art therapy. These two basic techniques have been extended to include "joint family scribe" (Kwiatkowska, 1967), "conjoint family drawing" (Bing, 1970), "joint family mural" (Rubin and Magnussen, 1974) and "symbolic drawing of the family life space" (Geddes and Medway, 1977).

These concepts are very similar to the KFST. However, information from these previous sculpturing techniques proved difficult to record and code for diagnostic or research purposes. The KSFT allowed for information to be easily recorded and organized into a variety of sub-scores that may be useful to the researcher or the clinician.

According to Cromwell and Fournier (1978), the KFST is well grounded in theoretical rationale and in addition, provides the following:

- 1) permanent record of both individual and family perceptions of the structure of their family relationships.
- 2) restricts the frame of reference to the test board itself, thereby reducing the interpersonal space one has to consider when creating the sculpture.
- 3) assesses theoretical concepts and dimensions relevant to the treatment process, (i.e. family cohesion and possibly family adaptability).
- 4) effectively involves clients in the completion of task
- 5) is relatively non-obtrusive and non-offensive.
- 6) requires minimal equipment, facilities, cost, and time to administer.
- 7) is appropriate to a wide variety of age groups and social classes and required few or verbal or physical skills.

Validity and Reliability (KFST)

Evidence of convergent validity for family cohesion has been established between the KFST and The Bowerman and Bahr Measure by utilizing a multitrait-multimethod analysis (Russell, 1980). Efforts at establishing convergent validity for family adaptability as measured by the KFST and SIMFAM were less fruitful. The Russell study used, as a measure of adaptability, the degree to which the joint family sculpture shifted from the previous individual sculptures.

Test-retest reliability performed on 90% of the original sample (N=20 families, 60 individuals) found family cohesion to be reliably measured by the KFST. Test-retest reliability on control (influence) scores were reported by Russell as being unstable for the fathers and children that were tested. The wives, however, did maintain a stable level of influence over the three month test-retest period. This phenomena was explained by Russell (1980) as being a function of the roles assumed by the wives, in relation to the demands associated with the activities of the different measures.

Testing Procedure for FACES I

Each family member was presented with the Informed Consent Form (see Appendix "D"). Each family member was instructed to answer each of the questions on the questionnaire. They were instructed to answer each question without consulting with

one another. If the physical setting permitted, each member was asked to go to a separate room to answer the questions. An easily scored answer sheet was provided.

The Informed Consent Form informed each family member that they could leave out any answer which he or she felt was too personal. However, the importance of answering all questions was emphasized.

The questionnaire was delivered to the family by the investigator. An estimated fifteen minutes was allotted for them to answer all 111 items. The family was instructed beforehand that during the total testing period, they were to have no visitors. Those present were asked to leave until completion of the testing. Following the collection of the questionnaire, the investigator proceeded to the second measure.

Testing Procedure for KFST

Following the completion of the FACES I questionnaire, family members were separated in order to complete individual sculptures. The purpose of separating the family members was to capture each family member's perception of the relationships in their family, independent of other members' perceptions. To avoid contamination, members' separation was assured by having each member of the family wait in a separate room.

The first task for each family member was to arrange the figurines on the sculpture board to represent the "real here and now relationship" in their family, as they perceive them.

The following instructions and procedures apply for the "real" individual sculpture.

We want you to play a game for us a couple of different ways. In front of you, we have different wooden figurines which are to represent the people in your family. You are to decide which figurines represent which member of your family and place each figure on this chessboard. In placing them on the board, try to describe your family as it really is. In other words, place the figures on the squares in such a position as to indicate the actual relationship of yourself to the other people in your family. You can only put one person in each square, but you can use any of the squares on the board. There is no right or wrong way to do this, just try to show us how you see your family. Do you have any questions?

CHAPTER III

RESULTS

Demographic Description of the Sample

Thirty-six families agreed to participate in this study. Of the thirty-six, sixteen families were in the non-clinic group. A family was composed of a father, mother, and adolescent son, all of which resided in the same house.

The father's mean age for both groups was 45.1 years, with a range from 29 to 58 years. The mother's mean age for both groups was 42.0 years, with a range from 30 to 54 years. Their adolescent son's mean age was 15.3 years, with a range from 12 to 17 years.

Hollingshead's (1965) Two Factor Index of Social Position was used to designate the father's and mother's occupation. According to his criteria, the father's occupations were as follows: 8.6% were higher executives or major professionals; 17.1% were business managers in large concerns; 14.3% were middle income professionals; 20.0% were administrative personnel or independent business owners; 2.9% were skilled labor professionals; 5.7% were clerical, sales workers or owners of small businesses, 2.9% were farmers; 5.7% were specialized technicians; 5.7% were skilled manual employees; 11.4% were machine operators or semi-skilled employees; and 5.7% were unskilled employees.

The mother's occupations were as follows: 25.7% were middle income professional; 20.0% were administrative personnel or independent business owners; 25.7% were housewives; 2.9% were skilled labor professionals; 11.4% were clerical, sales workers or owners of very small businesses; 2.9% were skilled manual employees; 5.7% were machine operators and semi-skilled manual employees; and 5.7% were unskilled employees.

The adolescents who participated in this study were in the following categories: 85.7% were full-time students in school; 2.9% were out of school and working; 5.7% were both in school and working; and 5.7% were in neither category for various reasons which were not considered in this study.

Of these parents, 85.7% were married once and 14.3% had been remarried at least one time. The size of their immediate families were as follows: 3.2% had three members; 25.8% had four members; 32.3% had five members; 16.1% had six members; 12.9% had seven members; 6.5% had eight members; and 3.2% had nine members.

Data Analysis

In their 1979 research, Olson, Bell and Portner established cutoff points for both the adaptability and cohesion dimensions of FACES. Because the Circumplex Model reports that extremes in either direction on either of these two dimensions are dysfunctional, the present researcher collapsed Olson, et. al.'s four categories per dimension into two categories per dimension. On the adaptability dimension, both "chaotic" and "rigid" were labeled under the category of extreme, while "flexible" and "structured" were labeled as comprising a "middle category". Similarly, on the cohesion dimension, both "disengaged" and "enmeshed" were labeled as "extreme", while "separated" and "connected" were labeled in the "middle category". Because of the "Curvilinear" nature of the FACES instrument, "extreme" versus "middle" relationships were examined by means of "transposed scores". These "transposed scores" were created by calculating the mean score of the sample on each dimension. This mean was then subtracted from the dimension score of each subject. The absolute value of these different scores yielded a measurement of the extremity of a score from the sample mean. These transposed scores could then be used to determine a subject's degree of extremity from the group mean, regardless of the direction of that extreme. These scores were used to determine the the curvilinear hypotheses generated by the FACES Model. A subsequent examination of the Pearson's

correlations between the variables led the researcher to investigate whether the actual dimensions of cohesiveness and adaptability might be linearly, rather than curvilinearly, related to delinquency. This linear examination also allowed the researcher to incorporate the Kveback sculpture task with both the FACES I cohesion and adaptability scores, upon which all three scores were computed conjointly.

The analysis of the data was carried out and is presented in two parts. First, the data were analyzed with the "middle" versus "extreme" computations (curvilinear relationships) and, secondly, in the linear fashion comparing "low" versus "high" categories. The data are presented in that order.

Results

The Transposed Means and Standard Deviations of FACES Scores

Means and standard deviations for delinquent and non-delinquent families were computed, utilizing the transposed FACES scores (Table III). For the most part, on both adaptability and cohesion, the mothers in the delinquent families saw their families as less extreme than the mothers in the non-delinquent families. For example, the delinquent families' mothers' estimate of adaptability, as indicated by the mean score, was 8.55, in comparison to the non-delinquent mother's estimate of 16.00.

The delinquent families' fathers' estimate of both adaptability and cohesion saw their families as somewhat more extreme than the non-delinquent families. The delinquent sons saw themselves less extreme in cohesion, with a mean score of 15.40, compared with their non-delinquent counterparts, with their mean score of 16.44.

The standard deviations were lower for mothers from delinquent families and fathers from non-delinquent families. Delinquent sons had a very high standard deviation for adaptability, but a slightly lower standard deviation for cohesion than did their non-delinquent counterparts.

Table III

Means and Standard Deviations for Delinquent and Non-Delinquent Families, of Transposed FACES Scores

Estimates	Delinquent Families		Non-Delinquent Families	
	<u>Adaptability</u>	<u>Cohesion</u>	<u>Adaptability</u>	<u>Cohesion</u>
Mother's	8.55 (5.28)	12.20 (9.51)	16.00 (8.41)	16.00 (11.41)
Father's	11.35 (8.74)	14.60 (13.68)	10.31 (7.31)	13.31 (9.75)
Son's	11.85 (13.51)	15.40 (11.36)	11.25 (6.94)	16.44 (11.99)

T-Tests of the Transposed FACES Scores

In Table IV, T-Tests between delinquent and non-delinquent families of the transposed FACES scores serves to check and see if any of the differences found in Table III are significant.

This analysis suggests that none of the differences found in Table III are significant, with the exception of the mother's view of adaptability, which, as one can see in examining Table IV, is significant to the .003 level. Information from Table IV indicates that the delinquent mothers saw their families as significantly less extreme in adaptability from Olson' norms than did the mothers from non-delinquent families.

These findings are not compatible with our predictions, particularly in these two specific areas. First of all, there is not much significance in the father's mother's or son's estimates and, secondly, the mother's estimate of adaptability is the opposite of what was expected.

This particular phenomena encouraged the investigator to go back and look at the raw scores, which gave the direction as to whether the family member's estimate are more or less adaptable or more or less cohesive.

Table IV

T-Tests, between Delinquent and Non-Delinquent
Families, of Transposed FACES Scores

	Mother's Estimate	Father's Estimate	Son's Estimate
Adaptability	3.25 $p < .003$	0.38 $p < .706$	0.16 $p < .873$
Cohesion	1.09 $p < .283$	0.32 $p < .753$	0.27 $p < .792$

Means and Standard Deviations of the Raw FACES and KFST Scores

In utilizing the raw scores, this part of the analysis avoided looking at the "extremes" versus "middle", and allowed the linear calculations of "low" versus "high" on both dimensions of adaptability and cohesion. This procedure also allowed for the incorporation of the Kvebaek sculpture task, in which the degree of cohesion could be examined in terms of the designated "distance" scores.

Table V means and standard deviations for delinquent and non-delinquent families, using FACES I adaptability and cohesion scores and the Kvebaek (KFST) distance scores, indicated that the delinquent families' mother's estimate of adaptability tended to be in the more chaotic end of the adaptability dimension than the non-delinquent mother's estimate. The delinquent families' mother's estimate of cohesion indicated less disengaged family styles than the non-delinquent families' mother's estimate. In addition, the mothers' of delinquent sons estimate of distance, as measured by the Kvebaek, indicated more disengaged family styles than the non-delinquent mothers.

The fathers' estimates in both delinquent and non-delinquent families were very similar with very slight differences. The delinquent families' fathers' estimates were very similar to the mothers' estimate of adaptability (185.85 versus 185.05), and the non-delinquent father's estimate of cohesion were similar to the mothers' estimate (260.69 versus 264.38).

Table V

Means and Standard Deviations, for Delinquent and Non-Delinquent Families, of Raw FACES I Adaptability and Cohesion Scores and KFST Distance Scores

Estimates	Delinquent Families			Non-Delinquent Families		
	<u>Adaptability</u>	<u>Cohesion</u>	<u>Distance</u>	<u>Adaptability</u>	<u>Cohesion</u>	<u>Distance</u>
Mother's	185.85 (9.81)	248.40 (15.49)	14.20 (13.84)	167.13 (8.66)	264.38 (14.58)	7.20 (3.01)
Father's	185.05 (14.41)	254.70 (19.93)	11.10 (7.24)	182.31 (12.90)	260.69 (13.56)	11.07 (8.03)
Son's	191.05 (16.19)	247.40 (19.11)	15.40 (14.41)	185.13 (13.36)	259.19 (18.99)	8.93 (5.70)

The sons' estimates in both delinquent and non-delinquent families were also very similar to their respective mothers' estimate, with the exception of the non-delinquent sons' estimate of adaptability. These non-delinquent sons perceived their family styles as being far more flexible than their mothers' perception (185.13 versus 167.13).

The standard deviation for families with a delinquent son were all higher than the standard deviations with no delinquency present. The delinquent families' fathers' estimates of "distance" was the only exception.

T-Tests of the Raw FACES and KFST Scores

A T-Test was conducted to make a determination as to which of these differences, found in Table V, were significant. As Table VI points out, nothing in the fathers' estimates was significant, nothing in the sons' estimates was significant, but all three scores of the mothers' estimates were significant. The mothers' estimate of adaptability, as measured by FACES, was significant to the .000 level and cohesion, measured by the same instrument, was significant to the .003 level. The distance score, as measured by the KFST, was also significant to the .040 level.

The importance of the mothers' estimate of adaptability, cohesion, and distance, as measured by these instruments, was certainly becoming increasingly more evident. However, before

any interpretations of this data could be extended, the researcher felt that the effects of social desirability must be accounted for.

TABLE VI

T-Tests, between Delinquent and Non-Delinquent Families of Raw FACES I
Adaptability and Cohesion Scores and KFST Distance Scores.

	Mother's Estimate	Father's Estimate	Son's Estimate
Adaptability	5.99 $p < .000$	0.59 $p < .557$	1.18 $p < .247$
Cohesion	3.15 $p < .003$	1.03 $p < .312$	1.84 $p < .074$
Distance	2.19 $p < .040$	0.01 $p < .990$	1.84 $p < .111$

Partial Correlation Coefficients, Partialing
Out the Social Desirability Score

In Table VII, partial correlation coefficients between delinquent and non-delinquent families, using FACES I adaptability and cohesion scores as well as the Kvebaek (KFST) distance score were provided, after partialing out the social desirability score from the FACES I instrument. After examining Tables III and IV, it became apparent that the comparison of "extreme" versus "middle" was not a useful procedure for this particular investigation. In Tables V and VI, when raw scores were computed, the differences were more apparent. The mother's estimate of adaptability and cohesion, as measured by the FACES instrument, and the distance score, as measured by the KFST, were all significant.

The analysis presented in Table VII partialied out the social desirability, as measured by the sub-scale within the FACES I instrument. This partial correlation table parallels, to a degree, the analysis presented in Table VI. Table VII revealed that the mother's estimates were still significant in two of the three variables, even when controls are incorporated for social desirability.

The mother's estimate of the family's adaptability, as measured by FACES I, was significant to the .000 level and their estimate of cohesion, as measured by FACES I, was significant to

the .007 level. The distance score, however, as measured by the KFST behavioral task, was not significant. The effects of social desirability on the KFST were clearly evident by this analysis.

TABLE VII

Partial Correlation Coefficients, between Delinquency and Non-Delinquency
for FACES Adaptability and Cohesion Scores and KFST Distance Scores
after Partialing out the Social Desirability Score from the FACES Instrument

	Mother's Estimate	Father's Estimate	Son's Estimate
Adaptability	-.628 $p < .000$	-.279 $p < .075$	-.353 $p < .033$
Cohesion	.458 $p < .007$.204 $p < .149$.334 $p < .041$
Distance	-.180 $p < .179$.224 $p < .126$	-.358 $p < .031$

As in the previous analysis, all the fathers' scores were not significant. However, once the social desirability was partialled out, all of the son's scores became significant, following the same pattern of the mothers' adaptability, cohesion, and distance. Therefore, the present analysis has indicated that social desirability was not a significant factor in the father's perceptions of their families, only a slight factor in the mothers' perceptions of their families, and was a very significant factor in the sons' perceptions of their families.

Stepwise Discriminant Analysis

A stepwise discriminant analysis between the classes of delinquent and non-delinquent families, using FACES I adaptability and cohesion scores and the KFST Distance scores as predictors, was performed in an attempt to identify the most powerful variables. What this investigation revealed was that the most important predictor was the mothers' estimates of adaptability and the second most important predictor was the mothers' estimate of cohesion, as delineated in Table VIII. Questions directed to the mother relating to these two dimensions together allowed the investigator to classify delinquent versus non-delinquent families 94.4% of the time.

There was a high rate of predictability when using responses from the FACES I provided by the mother, as long as direction of the transposed scores were taken into consideration, as opposed to "extremes versus middle" scores.

TABLE VIII

A Stepwise Discriminant Analysis between the Classes of
 Delinquent and Non-Delinquent Families using transposed FACES
 Adaptability and Cohesion Scores and KFST Distance Scores
 as Predictors

<u>Variable</u>	<u>Wilke's Lambda</u>	<u>Significance</u>	<u>Percentage of Cases</u>
Mother's Estimate of Adaptability	0.4397	$p < .000$	Grouped correctly in Classes = 94%
Mother's Estimate of Cohesion	0.2316	$p < .000$	

CHAPTER IV:
DISCUSSION, IMPLICATIONS and SUMMARY

Discussion

Two basic tenets of this research were that the dimensions of cohesion and adaptability are useful indicators in assessing optimal family functioning and secondly that these two dimensions were useful in assessing families with a delinquent adolescent boy. While the literature was rather supportive of this notion, support for the following hypotheses was very limited and not as predicted.

Hypotheses I - Those families in which there is no delinquency tended to be more extreme than their delinquent family counter parts. Contrary to the hypotheses, mothers in families with no delinquency appeared to be more extreme towards family rigidity in their estimates of adaptability, as measured by the FACES. T-tests between delinquent and non-delinquent families of transposed FACES I scores revealed that the only significant family members' perceptions was the mothers' at a .003 level (see Table IV).

Fathers' and sons' in non-delinquent families perception of adaptability, as measured by the FACES I, varied slightly with no significance, as measured by the T-tests.

Hypotheses II - Families in which there was no delinquency tended to be more extreme towards family connectedness and

enmeshment in their estimates of cohesion, as measured by FACES I. Mothers' estimates of cohesion in non-delinquent families tended to be somewhat more extreme towards family connectedness and enmeshment. Fathers' and sons' estimates of cohesion in non-delinquent families tended to be more extreme towards connectedness and enmeshment, though very slightly, than their delinquent counterparts. T-tests revealed that none of these estimates of cohesion, as measured by the FACES I, were significant.

The KFST measure of families with no delinquency indicated that less family triad distance was evident than in their delinquent counterparts. Fathers' and sons' estimates of distance were found to be insignificant whereas the mothers' estimates were all found to be significant at the 0.04 level or better (see Table VI).

This sub-part of the second hypotheses, in which the KFST measures were utilized to examine family triad distance among the family members, was more successful. The lack of success in confirming the preliminary research hypotheses did not deter the pursuit of research results. This result from the KFST encouraged the investigator to examine whether the actual dimensions of cohesion and adaptability might be linearly rather than curvilinearly related to delinquency. Rather than examining "extreme" versus "middle",

"low to "high", scores were computed and analyzed.

As a rule, these linear computations revealed that families with no delinquency tended to be less chaotic in terms of adaptability and less disengaged in terms of cohesion. Perhaps the most dramatic result was the focus upon the importance of the mothers' perceptions of family style variables and estimated family triad distance. All three correlations among the mother's perceptions (see Table VI) were significant at the .05 level or beyond (adaptability .000, cohesion .003, and distance .04). The mothers' importance, particularly in the area of family cohesion, was consistent with Russell's findings in her multi-trait, multi-method analysis in assessing validity of four separate measures; The Bowerman and Bahr Identification Scale, SIMFAM, Moos Family Environment Scale and the Kvebaek in her examination of cohesion and adaptability (Russell, 1980). This investigation suggested that the wife in a family was perceived by the husband and child more clearly as to her role in the home in terms of cohesion.

The partialing out of the social desirability score from the FACES I instrument indicated some interesting results on behalf of the mothers' and sons' estimates. What this investigator found was the the mothers' estimates were significantly different in the two groups, even when controls were in place. The significance of the mothers' response

to social desirability, as measured by the FACES I instrument for adaptability, was .000 and, for cohesion, was .007. The mother's estimates of cohesion, as measured by the family triad distance score on the KFST measure, were found not to be significant. Basically, this could mean that social desirability may have had an effect on mothers with a delinquent adolescent son, to put themselves as perceiving the family as more distant.

Family members established more distance between themselves in terms of the KFST, because the KFST is a more obvious behavioral measure and a graphic expression of their family. These family members may have felt the necessity in demonstrating behaviorally that there is more distance. The effects of social desirability were less dramatic on the FACES I instrument, because it is a more discreet pen and paper self-report measure. The fathers were less effected in their response to social desirability.

As far as the sons were concerned, when controls for social desirability were initiated, several things became apparent. First of all, adaptability, cohesion and the distance scores all showed a significant correlation, when controls for social desirability were used. A logical explanation one could advance is that the delinquent sons were faking normality and, therefore, their need for social desirability was effected by the testing situation. The

reasons for this phenomenon may be many, but most obviously, these young delinquent boys may have felt a need to impress their probation officers, judges, etc. Social pressure was also very apparent on the non-delinquent boys, because this population was taken from referrals recommended by the County Extension Office as being normal and high functioning teenagers. Therefore, both groups of sons had social pressures on them to perform on the measures. This pressure and need for social desirability tended to pull them into the normal ranges.

As data from this investigation (Table VII) suggests, fathers and sons simply do not have the acuity of perspection to make significant distinctions that separate delinquent from non-delinquent populations in terms of adaptability, cohesion, and family triad distance, as measured by the FACES I and KFST.

Mothers seemed to serve as the "family barometer", as far as these variables and measures are concerned. This investigation suggested that mothers were in touch with their families and social desirability didn't seem to make much difference, provided the measure was discreet enough. It is interesting to note that mothers' estimates were in one direction, not in two, as originally advanced within the concepts of the Circumplex Model. A unidirectional approach makes a difference, and that difference was significant.

When "low" versus "high" was computed, as opposed to the "extreme" versus "middle" as Olson et. al. suggested, the two instruments FACES I and KFST were consistent. That is, delinquent family's styles of functioning were basically more chaotic and disengaged. The Olson et. al. model seemed to argue that these families could have also been enmeshed and rigid. This investigation, as it applies to delinquent families, suggested that the relationship was linear not curvilinear as previously thought. These families were found to be in the direction of the chaotic disengaged quadrant of the Circumplex Model. The FACES I and KFST were compatible and consistent in the examination of cohesion when unidirectionality was examined.

The first hypothesis and the second hypotheses with its first sub-component failed to be supported. The second component of the second hypotheses received support. Family style variables of cohesion and adaptability were linear and not curvilinear, when delinquency was examined. From the results of this study, there is no indication that "extremes" versus "middle" in the Circumplex Model were relevant to the assessment of family style and delinquency.

It is important to note that only twenty percent of the clinic families agreed to participate in this study. The lack of evidence from this study in finding delinquency in families on the enmeshed end of the cohesion dimension may be

related to the considerably low rate of agreement to participate in the study. Enmeshed families with a delinquent adolescent may have simply chosen not to participate. It has been found that enmeshed families tend to have more pronounced external family boundaries (Bowen, 1966)(Scott and Askworth, 1967)(Wynn's, 1958). Enmeshed families may have been reluctant to let an observer (i.e. research investigator) in their home to collect data.

In addition, the results of this study suggest that clinic families tended to fall on the extreme of the cohesion dimension towards disengagement, may be either a function of disengagement or extreme cohesion. When the disengagement score is an accurate reflection of the family's disengaged lifestyle, the results are self-evident. However, disengagement may also be caused by an enmeshed family's expulsion of a non-conforming family member (in this case, the adolescent)(Minuchin, 1974). In this circumstance, the family seeks to protect its integrity and underlying enmeshed nature by acting in a disengaged manner in order to rid the family of the disruptive centrifugal force.

The dynamics of delinquency may also play an important consideration in the discussion of these results. Delinquency can be a very frustrating and noxious experience for parents.

A family that is neither disengaged nor enmeshed may appear to be disengaged, because the parents seek to place distance between themselves and their delinquent adolescents. Parents may be inclined to disengage themselves from the delinquent member, simply because of the type of behavior and dynamics which accompany delinquency. Therefore, even a non-extreme family may appear to be and may define themselves as being disengaged, thereby contaminating the interpretation of the results.

The Stepwise discriminant analysis between the classes of delinquent and non-delinquent family (Table VIII) revealed some rather interesting results. When questions were directed to the mother, relating to cohesion and adaptability, and when these FACES I scales were taken together, they allowed investigators to classify delinquency and non-delinquency 94.4 of the time.

This investigation indicated that there may be some merit for predictability, when using responses from the FACES I provided by the mother, as long as direction is taken into consideration, as opposed to extremes on the Circumplex Model.

Limitations of This Study

Due to the nature of this study, volunteers were recruited from Separate Juvenile Court files and County Extension personnel. This is hardly a random sample of even Omaha families. The question arises as to whether the subjects who volunteered were representative of delinquent youth and high functioning normal youth. The delinquent youth on probation were a carefully monitored group and this investigator was introduced to these families from court personnel. The social desirability effects of this arrangement could have served as a rather dramatic limitation to this study.

The small sample size of 36 families could allow for practically any type of sampling error and could limit significantly the extent of the research. This research was also limited by the effects of taking all measurements at roughly the same point in time. This lack of time variable made it difficult to impose a casual ordering upon the variables, without resorting heavily to theoretical assumptions developed from an examination of the literature.

In addition, the Circumplex Model and FACES I were validated in Minneapolis. In that area, Olson found that 183 was the mid-point of cohesion. One could advance the notion that in Omaha, 167 may be the mid-point of cohesion

and, therefore, the degree of chaos in Omaha families may contribute to the incidence of delinquency and may not contribute to delinquency in another area of the county. The FACES I may lack the versatility allowing for the instrument to be adapted to the indigenous factors of each separate part of the county. This lack of generalizable results severely limits the study. For a more accurate analysis of the data, a larger sample and manipulation of the cutting points of FACES I scores may be necessary. The cutoff points on FACES I is an issue which was clearly delineated by Benigas in his investigation with foster families (Benigas, 1980).

Practical Applications

The indication that responses from the mother on FACES I may give significant predictability in assessing delinquency was very exciting. The use of this concept to courts, social workers, probation officers, and other human service providers who deal with delinquent youth may establish a new direction for assessment. The importance of the mother's perceptions and the notion that delinquency may be a linear function, within the established criteria of the Circumplex Model, may allow for a more fundamental use of the concepts of cohesion and adaptability.

The evidence in this thesis investigation also indicated that a more subtle and discreet measure for assessment, such as a pen and paper measure like FACES I, may reveal more accurate information, especially for adolescents, than a behavioral measure for assessing cohesion. The need for social desirability may be too much of a confound for assessing this population accurately.

Suggestions for Future Research

This study is just a start at empirically examining the Circumplex Model with delinquent and non-delinquent families. Both the model and the area of delinquency are two areas with rather limited investigation. As prevalent as delinquency is and the need to resolve problems with our youth and families, the empirical investigation into the area is startlingly scarce.

This study did suggest some rather interesting areas for future research, such as the persistence of the mother's perceptions of cohesion and adaptability. This phenomenon of the mother's role in the family as the most accurate barometer for assessing family process as it relates to delinquency makes it desirable for more rigorously designed research to be conducted. The role of father and the lack of knowledge of the family style factors and delinquency within their own home also invite the investigator to possibly examine

the functions which seem to maintain this situation.

I also find it worthy to note, but a little difficult to explain, that the mother's correlations which are based on the self-report pen and paper measure FACES I measure seem less effected by the need for social desirability. The behavioral measures were considered by some to be somewhat less indirect. Comparable reseach into the effects of behavioral measures may reveal new merits for the pen and paper measure.

Summary

The results of this study indicate that self-reported family cohesion and adaptability (as measured by FACES I) have more significance when "low" and "high" scores are examined as oppoesed to "extremes" versus "middle" scores. For purposes of this study and the examination of delinquency and the Circumplex Model, linear analysis was far more revealing than curvilinear analysis. This may be more of a function of delinquency and the difficulty of measuring family functioning, than it is a function of the Circumplex Model. A family with a delinquent member quite simply may not be compatible with the "extremes" versus "middle" concepts of the Circumplex Model. This study did clearly indicate, however, that unidirectionality was more significant

than bidirectionality.

This study also revealed the startling significance of the mother's perceptions and accuracy to which they are capable of assessing delinquency. The adolescent's perceptions are also important, however, the adolescents' results are confounded by their desire to fake normality.

The role of the father and his "head in the sand" understanding of his family in terms of cohesion, adaptability and delinquency, the importance of the mother's perceptions and the adolescent's sensitivity to social desirability are all areas that need rigorous investigations before the family functioning can be analyzed in relation to delinquency.

Bibliography

- Benigas, Jon. Interaction in foster families: an application of the circumplex model of marital and family systems. Unpublished Masters Thesis, Kansas State University, 1980.
- Bing, E. The conjoint family drawing. Family Process, 1970, 9, 173-174.
- Buckley, W. Sociology of Modern Systems Theory. Englewood Cliffs, N.J.: Prentice Hall, 1967.
- Bowen, M. The use of family theory in clinical practice. Comprehensive Psychiatry, 1966, 7, 345-374.
- Cass, L. Parent-child relationships and delinquency. Journal of Abnormal and Social Psychology, 1952, 47, 101-104.
- Cohen, D., Caparulo, B. & Shaywitz, B. Primary childhood aphasia and childhood autism: Clinical, biological and conceptual observations. Journal of the American Academy of Child Psychiatry, 1976, 15, 604-645.
- Cromwell, R., & Fournier, D. The Kvebaek family sculpture technique: Theoretical rationale and research applications. Chapter forthcoming in the Kvebaek Family Sculpture Technique by David J. Kvebaek, Vikersund: Norway, 1978.
- Duke, M. & Fenhagen E. Self-parental alienation and locus on control in delinquent girls. Journal of Genetic Psychology, 1975, 127(1), 103-107.
- Fleck, S. & Lidz, T. The intrafamilial environment of the schizophrenic patient: VI. The transmission of irrationality. Archives of Neurological Psychiatry, 1958, 79, 305-316.
- Framo, J. Systematic research on family dynamics. Ivan Boszormenyi-Nagy and James L. Framo (eds.). Intensive Family Therapy: Theoretical and Practical Aspects. New York: Harper and Row, 1965m pp.407-462.
- Geddes, M. & Medway, J. The symbolic drawing of the family life space. Family Process, 1977, 16, 219,228.
- Glueck, S. & Glueck E. Unraveling Juvenile Delinquency. Cambridge, Massachusettes: Howard University Press, 1950.
- Glueck, W. & Glueck E. Family Environment and Delinquency. Boston: Houghton Mifflin Company, 1962.
- Gruher, M. Family counseling and the status offender. Juvenile and Family Court Journal, 1979, 30, 23-29.

- Haley, J. Research on family patterns: An instrument measure. Family Process, 1964, 3, 41-65.
- Haley, J. Speech sequences of normal and abnormal families with two children present. Family Process, 19, 6, 81-97.
- Hess, R. & Handel, G. Family Worlds: A Psychosocial Approach to Family Life. Chicago: University of Chicago Press, 1959.
- Hetherington, E., Stouwie, R. & Ridgerg, E. Patterns of family interaction and child-rearing attitudes related to three dimensions of juvenile delinquency. Journal of Abnormal Psychology, 1971, 78(2), 160-176.
- Hirsch, T. Causes of Delinquency. Berkeley & L.A.: University of California Press, 1969.
- Hutzler, J. Family Pathology in crime and punishment. The American Journal of Psychoanalysis, 1978, 38(4), 335-343.
- Janekela, G. Mandatory parental involvement in the treatment of delinquent youth. Juvenile and Family Court Journal, 1979, 30(1), 47-35.
- Johnson, T. The juvenile offender and his family. Juvenile Justice, 1975, 26(1), 31-34.
- Jurkovic, G. & Prentice, N. Dimensions of moral interaction and moral judgment in delinquent and non-delinquent families Journal of Consulting and Clinical Psychology, 1974, 42, 256-262.
- Kantor, D. & Lehr, W. Inside the Family. San Francisco: Jossey Bass, 1975.
- Kieren, D. & Tallman, I. Spousal adaptability: An assessment of marriage competence. Journal of Marriage and the Family, 1972, 34, 247-256.
- Kwintkowska, H. Family act therapy. Family Process, 1967, 6, 37-55.
- Levinger, G. Supplementary methods in family research. Family Process, 1963, 2(2), 357-366.
- Lewis, D., Balla, D., Shanok, S. & Snell, L. Delinquency, parental psychopathology, and parental criminality, clinical and epidemiological findings. Journal of the American Academy of Child Psychiatry, 1976, 15(4), 665-678.

- Mays, J. Juvenile Delinquency the Family and the Social Group. London: Longman Group Limited, 1972.
- McCord, W., McCord, J. & Zola, I. Origins of Crime. New York: Columbia University Press, 1959.
- Medinnus, G. Delinquents perceptions of their parents. Journal of Consulting Psychology, 1965, 29(6), 592-593.
- Minuchin, S. Families and Family Therapy. Cambridge: Harvard University Press, 1974.
- Nagy, I., & Spark, G. Invisible Loyalties. New York: Harper and Row, 1973.
- Norland, S., Shover, N., Thornton, W. and James, J. Intrafamily conflict and delinquency. Pacific Sociological Review, 1979, 22(2), 223-241.
- Olson, D. Bridging research theory and application: The triple threat in science. In Olson, D. (Ed.), Treating Relationships. Lake Mills: Graphic Publishing, 1976.
- Olson, D. Insiders' and outsiders' view of relationships: Research strategies. In Levinger, G. & Raush, H. (Eds.), Close Relationships. Amherst, Massachusetts: University of Massachusetts Press, 1978.
- Olson, D., Bell, R., & Protner, J. Family Adaptability and Cohesion Evaluation Scales. Unpublished inventory, University of Minnesota, 1978
- Olson, D., Sprenkle, D. & Russell, C. Circumplex model of marital and family systems I: Cohesion and adaptability dimensions, family types and clinical applications. Family Process, in press, 1979.
- Papp, P., Silverstein, O. & Carter, E. Family sculpturing in preventive work with well families. Family Process, 1973, 12, 197-212.
- Peterson, D., & Becker, W. Family interaction and delinquency. In Quay, H. (ed.), Juvenile Delinquency: Research and Theory. Princeton: Van Nostrand, 1965.
- Picou, J. Significant others influence and aspirations. Journal of Sociology of Education, 1976, 49, 12-22.
- Rubin, J. & Magnussen, M. A family art evaluation. Family Process, 1974, 13, 185-200.

- Reiss, D. Varieties of consensual experience, I. A theory for relating family interaction to individual thinking, Family Process, 1971a, 10, 1-27.
- Reiss, D. Varieties of consensual experience, II. Dimensions of a family's experience of its environment. Family Process, 1971b, 10, 28-35.
- Reiss, D. Varieties of consensual experience, III. Contrast between families of normals, delinquents, and schizophrenics. Journal of Nervous and Mental Disease, 1971c, 152, 73-95.
- Russell, C. Circumplex model of marital and family systems III: Empirical evaluation with families. Family Process, in press, 1979.
- Russell, C. A Methodological study of Family Cohesion and Adaptability. Journal of Marriage and Family Therapy, 1980, 459-470.
- Schaefer, E. Childrens reports of parental behavior: An inventory. Child Development, 1965, 36, 413-424.
- Scott, R. & Askworth, P. Closure at the first schizophrenic breakdown: A family study. British Journal of Medical Psychology, 1967, 40, 109-145.
- Sobel, H. & Sobel, W. Discriminating adolescent male delinquents through the use of kinetic family drawings. Journal of Personality Assessment, 1976, 40(1), 91-94.
- Sorrells, J. Kis who kill, Crime and Delinquency, 1977, pp. 312-320.
- Speer, D. Family systems: Morphostasis and morphogenesis, or "Is homeostasis enough?" Family Process, 1970, 9, 259-278.
- Sprenkle, D. & Olson, D. Circumplex model of marital systems: An empirical study of clinic and non-clinic couples. Journal of Marriage and Family Counseling, 1978, 4(2), 58-74.
- Stabenau, J., Tupin, J., Werner, M. & Pollin, W. A comparative study of families of schizophrenics, delinquents, and normals. Psychiatry, 1965, 28, 45-49.
- Stierlin, H. Separating Parents and Adolescents. New York: Quadrangle, 1974.

- Tallman, I. Adaptability: A problem solving approach to assessing childrearing practices. Child Development, 1961, 32, 651-668.
- Watzlawick, R., Beavin, J., & Jackson, D. Pragmatics of Human Communication. New York: Norton, 1967.
- Winter, W. & Ferreira, A. Interaction process analysis of family decision-making. Family Process, 1967, 6, 155-172.
- Wynne, L., Irving, M., Ryckoff, J., & Stanley, H. Pseudo-mutuality in the family relations of schizophrenics. Psychiatry, 1958, 21, 205-222.

Appendix A

FACES I Questionnaire

FACES I

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

1. Family members are concerned with each other's welfare.
2. Family members feel free to say what's on their mind.
3. We don't have spur of the moment guests at mealtime.
4. It is hard to know who the leader is in our family.
5. It's difficult for family members to take time away from the family.
6. Family members are afraid to tell the truth because of how harsh the punishment will be.
7. Most personal friends are not family friends.
8. Family members talk a lot but nothing ever gets done.
9. Family members feel guilty if they want to spend some time alone.
10. There are times when other family members do things that make me unhappy.
11. In our family, we know where all family members are at all times.
12. Family members have some say in what is required of them.
13. The parents in our family stick together.
14. I have some needs that are not being met by family members.
15. Family members make the rules together.
16. It seems like there is never any place to be alone in our house.
17. It is difficult to keep track of what other family members are doing.
18. Family members do not check with each other when making decisions.
19. My family completely understands and sympathizes with my every mood.
20. Family ties are more important to us than any friendship could possibly be.

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

21. When our family has an argument, family members just keep to themselves.
22. Family members often answer questions that were addressed to another person.
23. The parents check with the children before making important decisions in our family.
24. Family members like to spend some of their free time with each other.
25. Punishment is usually pretty fair in our family.
26. Family members are encouraged to have friends of their own as well as family friends.
27. Family members discuss problems and usually feel good about the solutions.
28. Family members share almost all interests and hobbies with each other.
29. Our family is not a perfect success.
30. Family members are extremely independent.
31. No one in our family seems to be able to keep track of what their duties are.
32. Family members feel it's "everyone for themselves".
33. Every new thing I've learned about my family has pleased me.
34. Our family has a rule for almost every possible situation.
35. We respect each other's privacy.
36. Once our family has planned to do something, it's difficult to change it.
37. In our family, we are on our own when there is a problem to solve.
38. I have never regretted being with my family, not even for a moment.
39. Family members do not turn to each other when they need help.

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

40. It is hard to know what other family members are thinking.
41. Family members make visitors feel at home.
42. Parents make all the important decisions in our family.
43. Even when everyone is home, family members spend their time separately.
44. Parents and children in our family discuss together the method of punishment.
45. Family members have little need for friends because the family is so close.
46. We feel good about our ability to solve problems.
47. Although family members have individual interests, they still participate in family activities.
48. My family has all the qualities I've always wanted in a family.
49. Family members are totally on their own in developing their ideas.
50. Once a task is assigned to a family member, there is no chance of changing it.
51. Family members seldom take sides against other members.
52. There are times when I do not feel a great deal of love and affection for my family.
53. When rules are broken, family members are treated fairly.
54. Family members don't enter each other's areas or activities.
55. Family members encourage each other's efforts to find new ways of doing things.
56. Family members discuss important decisions with each other, but usually make their own choices.
57. If I could be a part of any family in the world, I could not have a better match.
58. Home is one of the loneliest places to be.
59. In our family, it's important for everyone to express their opinion.

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

60. Family members find it easier to discuss things with persons outside the family.
61. There is no leadership in our family.
62. We try to plan some things during the week so we can all be together.
63. Family members are not punished or reprimanded when they do something wrong.
64. In our family, we know each other's close friends.
65. Our family does not discuss its problems.
66. Our family doesn't do things together.
67. If my family has any faults, I am not aware of them.
68. Family members enjoy doing things alone as well as together.
69. In our family, everyone shares responsibilities.
70. Parents agree on how to handle the children.
71. I don't think anyone could possibly be happier than my family.
72. It is unclear what will happen when rules are broken in our family.
73. When a bedroom door is shut, family members will knock before entering.
74. If one way doesn't work in our family, we try another.
75. Family members are expected to have the approval of others before making decisions.
76. Family members are totally involved in each other's lives.
77. Family members speak their mind without considering how it will affect others.
78. Family members feel comfortable inviting their friends along on family activities.
79. Each family member has at least some say in major family decisions.

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

80. Family members feel pressured to spend most free time together.
81. Members of our family can get away with almost anything.
82. Family members share the same friends.
83. When trying to solve problems, family members jump from one attempted solution to another without giving any of them time to work.
84. We have difficulty thinking of things to do as a family.
85. Family members understand each other completely.
86. It seems as if we agree on everything.
87. It seems as if males and females never do the same chores in our family.
88. Family members know who will agree and who will disagree with them on most family matters.
89. My family could be happier than it is.
90. There is strict punishment for breaking rules in our family.
91. Family members seem to avoid contact with each other when at home.
92. For no apparent reason, family members seem to change their minds.
93. We decide together on family matters and separately on personal matters.
94. Our family has a balance of closeness and spearateness.
95. Family members rarely say what they want.
96. It seems there are always people around home who are not members of the family.
97. Certain family members order everyone else around.
98. It seems as if family members can never find time to be together.
99. Family members are severely punished for anything they do wrong.

4 = true all of the time 2 = true some of the time
3 = true most of the time 1 = true none of the time

- 100. We know very little about the friends of other family members.
- 101. Family members feel they have no say in solving problems.
- 102. Members of our family share many interests.
- 103. Our family is as well adjusted as any family in this world can be.
- 104. Family members are encouraged to do their own thing.
- 105. Family members never know how others are going to act.
- 106. Certain individuals seem to cause most of our family problems.
- 107. I don't think any family could live together with greater harmony than my family.
- 108. It is hard to know what the rules are in our family because they always change.
- 109. Family members find it hard to get away from each other.
- 110. Family members feel that the family will never change.
- 111. Family members feel they have to go along with what the family decides to do.

Appendix B

Scoring Procedures for FACES I

Scoring Procedures for FACES I

Computation of scores for FACES I provides total scores for each family member in three areas or dimensions; (1) the Edmonds Social Desirability Score, (2) Adaptability Dimension Score, and (3) Cohesion Dimension Score.

The FACES I answer sheet provides the person scoring the results with a number for each answer. The answer is then multiplied by this number to provide weighted scores for each sub-scale within each dimension. Under family adaptability, the sub-scales are: assertiveness, control, discipline, negotiation, roles, rules, and systems feedback. Under family cohesion, the sub-scales are: emotional bonding, independence, family boundaries, coalitions, time, space, friends, decision-making, interests, and recreation.

According to Olson, Bell, and Portner (1978; p.6), the breakdown of these scores are as follows:

Family Cohesion: The possible range for this scale is
162 to 303.

(271-303) indicates high cohesion

(231-270) indicates moderate cohesion

(162-230) indicates low cohesion

Family Adaptability: The possible range for this score is
109 to 236.

(199-236) indicates high adaptability

(167-198) indicates moderate adaptability

(109-166) indicates low adaptability

To determine the total family score on each of these areas, each individual's score in each area of adaptability, cohesion, and social desirability is added up and divided by the number of participating family members. This allows for families to be compared with other families.

Appendix C

Scoring Procedures for KFST

Scoring Procedure for KFST

This investigator is concerned with the calculation of the "triad family distance" score in order to perform this study. According to Cromwell and Fournier (1978, p. 19), the calculation of scores using the KFST assumes three conditions; (1) that each square on the sculpture grid contains only one figure; (2) the distance between each adjacent square is equal to 1; and (3) as distance between figurines increases, the underlying psycho-social reasons for those distances become more important (increases).

In order to establish the "triad family distance" score, it becomes necessary to first calculate "individual distance" scores. This distance is calculated by counting the number of squares between each figure and squaring that number. Diagonal distances are calculated by using the law of the right triangles, $h^2 = a^2 + b^2$. The squaring of these distances provides greater variance to explain and facilitate identification of emergent and reoccurring patterns of perceived family relationships.

The "triad family distance score" is the sum of each of the individual distances. This number divided by the number of individuals (3) will provide a rough "triad family distance score" that can be used to compare with other families.

Appendix D

Informed Consent



Department of Family and Child Development
Justin Hall
Manhattan, Kansas 66506

INFORMED CONSENT

The purpose of this study is to find out more about the relationship among family members and their teenage sons and daughters. If you choose to participate, you and members of your family will be asked to answer a number of questions about situations which are of common concern among families. Also, each family member will be asked to participate in a short game requiring the arranging of figurines on a small board similar to a chessboard.

The questionnaire is short, requiring approximately fifteen minutes to complete. The game, involving figurines, requires an additional fifteen minutes to complete. Past experience with this game has been fun for family members to participate. Safeguards have been taken to assure that all responses on both the questionnaire and the game will remain completely confidential, and that the identity of each respondent will remain anonymous. There will be no names associated with answers in any public or private report of the results.

This study is being conducted under the guidelines and supervision of Dr. Anthony Jurich, Dr. Candyce Russell, and Dr. Steve Bollman, Kansas State University. You and your family are free to withdraw from this study at any time you wish. Should you choose to participate, please sign on the appropriate line below.

Further questions should be referred to either Dr. Russell or Dr. Jurich at 913-532-5510, or Frank DeCastro at 913-539-2451.

Parent Date

Parent Date

Son or Daughter Date

Witness Date

CIRCUMPLEX MODEL OF
MARITAL AND FAMILY SYSTEMS:
EMPIRICAL TEST WITH
FAMILIES OF DELINQUENT AND
NON-DELINQUENT ADOLESCENT BOYS

by

FRANK W. DeCASTRO, Jr.

B.A. University of Northern Colorado, 1970

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1982

Abstract

Sixteen families with an adolescent son and twenty families with a delinquent adolescent son were tested with a self-report measure FACES I and a behavioral sculpture task called Kvebaek. The FACES I measured cohesion and adaptability, and the Kvebaek measured cohesion within each family triad. It was hypothesized that families with a delinquent son would fall on the "extremes" of cohesion and adaptability, while non-clinic families would fall within "middle" ranges.

The results of this study indicated that self-reported family cohesion and adaptability (as measured by FACES I) had more significance when "low" and "high" were examined as opposed to the "extreme" verses "middle". This linear analysis was far more revealing than the anticipated curvilinear approach.

This study also indicated the significance of the mother's perceptions and accuracy to which they are capable of assessing delinquency. The adolescents' perceptions were also important, but were considerably confounded by their need for social desirability.

Family functioning is complex and the repeated acts of delinquency by adolescents and the maintenance of such behavior is often misunderstood. Future research is necessary to adequately determine the relationship of family cohesion, family adaptability, and delinquency.