A STUDY of SIBLING RIVALRY in FIFTY
PRE-SCHOOL CHILDREN

by
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Submitted in fulfilment of the requirements
for the degree of
Master of Arts
Department of Psychology
University of Cape Town.


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ABSTRACT

An exploratory study of 50 pre-school children was carried out in an attempt to assess the influence on sibling rivalry of maternal attitudes, family composition and the child's perceptions of family relations. Maternal attitudes and the child's attitude towards parents were not related to sibling rivalry. Rivalry was significantly higher following displacement and at the closer spacings. The results were interpreted in terms of an interactional analysis of sibling rivalry.
Sibling rivalry is a problem often encountered in clinical work with children and many speculative comments have been made regarding its cause and detrimental effects on the individual's personality and adjustment, eg. Ginott (1965), Ziman (1950). However, sibling relationships, and in particular sibling rivalry, have received little attention from researchers, apart from a few early studies, eg. Sewall (1930), Levy (1937). Thus the background to this study has been drawn from studies only indirectly related to sibling rivalry, and from largely unsubstantiated theoretical formulations. The relevant literature has been reviewed and three theoretical approaches to sibling rivalry have been described, ie. social learning, developmental (psychoanalytic) and interactional approaches.

Sibling rivalry is most often seen as arising out of the frustration of the child's dependency needs because the parents must share their time and attention among all the siblings. Thus the sibling becomes a rival for parental nurturance and warmth. An alternative view is that rivalry arises directly from sibling interaction because of the differential power and status of the children.

In this study the influence of various factors on the relationship between the subject and his/her siblings has been investigated. In particular, the effects of maternal attitudes, family composition and the child's perceptions of relations within the family were related to a measure of sibling rivalry.

The aim of the investigation was to carry out an empirical study to clarify the existing contradictions about sibling rivalry, to test certain hypotheses and to conduct a descriptive analysis of the data.

Hypothesis I: Maternal over-protection will be significantly positively related to sibling rivalry.

Hypothesis II: Where the child perceives that his parents have little positive regard for him, he is more likely to show jealousy and rivalry towards his sibling(s).
Hypothesis III: Sibling rivalry will be significantly greater when the child has been displaced than when he has no younger siblings.

Hypothesis IV: Sibling rivalry will decrease as the spacing between the siblings increases.

Method: The subjects were 50 pre-school children and their mothers. The children's average age was 5 years 3 months and they came from middle-class homes. The mothers were asked to complete the Maryland Parental Attitude Survey, the Sibling Relationship questionnaire and a background data sheet. The children were tested on the Family Relations Test. The results were analysed using nonparametric statistics.

Results and conclusions:
1. Sibling rivalry scores were not significantly related to maternal attitudes, ie. Hypothesis I was not supported.
2. Sibling rivalry scores were not significantly related to the child's perceptions of parents' attitudes towards him, ie. Hypothesis II was not supported.
3. Sibling rivalry scores were significantly higher for displaced children than for children without younger siblings, i.e. Hypothesis III is supported.
4. Family density and spacing range were significantly negatively related to sibling rivalry scores (using a one-tailed test), ie. Hypothesis IV received tentative support. In addition the degree of hostility felt towards a sibling was related to the spacing between them, ie. was higher when the sibling was four or less years distant from the subject. This result also supports hypothesis IV.
5. Hostility felt towards siblings was significantly related to the sex of the sibling, ie. subjects felt more hostile towards brothers than towards sisters, particularly if the sibling is older than the subject.

The results were interpreted as supporting the idea that the original stimulus for rivalry is often the lessening or threatened loss of parental nurturance and warmth but that present rivalry is not directly related to concern about
(iv)

Parental regard or to the parents child-rearing attitudes. Direct sibling interaction seems to be a more important factor in later rivalry especially when the sibling is older than the subject.
INTRODUCTION.

The purpose of this investigation is to study sibling relationships and in particular sibling rivalry. The subject was chosen because of its relevance in clinical work with children and because sibling interaction is thought to have a significant influence of the child's personality development. Despite their importance in family and developmental psychology, sibling relationships have received relatively little attention from research workers. Taking this into account, the project is envisaged as an exploratory study to try and isolate some of the factors which influence the quality of the sibling relationship.

Relation is defined in the Oxford dictionary as "what one person or thing has to do with another, kind of connexion; or correspondence or contrast or feeling that prevails between persons or things". The term sibling relationship is taken to denote the attitudes and behaviour of the child in relation to his brothers and sisters. Sibling rivalry is one facet of this relationship which may or must occur (some writers eg. Anna Freud 1966, Ginott 1965, imply that it is a universal and inevitable condition.) The motivation for rivalry is taken to be jealousy. Jealousy is usually defined as the supposition that another person has or threatens to usurp something that one needs or values. In jealousy of siblings the 'something' is most often interpreted as being the love and attention of the mother but could also be status or privilege etc. as will be discussed later. It is presumed that jealousy produces hostile and competitive attitudes that may appear directly in behaviour, i.e. aggression and competition or may manifest themselves in other ways, eg. withdrawal, regression, attention-seeking or other problem behaviour. Thus the cause of sibling rivalry must be sought in the factors which influence the development of jealousy, but it can only be measured in terms of the attitudes and behaviour outlined above.

Sibling rivalry is a term often used in clinical practice, and although it is often not initially or spontaneously given by the parents as the main problem, it arises in a surprising number of cases, if investigated.

Information on the incidence of jealousy is given in a recent survey carried out by Shepherd, Oppenheim and Mitchell (1971). This was a large scale survey of the behaviour of 6,000 Buckinghamshire
school children. Mothers were asked to rate their children on
a number of scales and jealousy was included in the category of
emotional behaviour. Jealousy was rated on a three point scale,
ie. very jealous, occasionally shows jealousy, and seldom or
never jealous. Both mild and extreme jealousy were most prevalent
among five year olds. After five the proportion of children who
were seldom or never jealous rose steadily from 40% of five year
olds to 50% of girls and 65% of boys over 13. At all ages girls
were more likely than boys to show occasional jealousy but there
was no marked sex difference among very jealous children.

% of children recorded as showing extreme jealousy at each age
from 5 - 15.

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From Shepherd, Oppenheim and Mitchell (1971)

In a follow-up study two and a half years after the original
survey it was found that extreme jealousy persisted in 44% of the
cases.

Some degree of jealousy seems fairly common at all ages and
especially among younger children. Over 50% of five year olds
showed some jealousy. The extreme jealousy, which is taken to
constitute 'deviant' behaviour is only seen in a relatively
small proportion of children but it still constitutes a larger
group than others, eg. autistic children, which have received
intensive study.

The clinical implications of a poor sibling relationship, ie.
jealousy and rivalry, have not been fully explored. The immediate
result is often behaviour which the mother finds problematical,
eg. aggression or withdrawn and regressed behaviour, and which may
reflect feelings of unhappiness, frustration, inferiority and
rejection on the part of the child.

The description of long term effects is purely speculative
but many writers feel that unresolved jealousy will have permanent
effects on the individual's personality. Redlich & Freedman (1966)
state that "a particularly harsh sibling rivalry in childhood, reinforced
in peer realtionships may condition the tempo and pattern of
conduct in the prime of life ...... competitive needs become so
conflictful or dominant as seriously to interfere with current adjustments and satisfactions. Podolsky (1954) feels that it will lead to neurotic symptoms in the adult. Jersild (1960) states that while the obvious symptoms of early jealousy are lost, the jealous attitudes may be transferred to other figures in later life, e.g., from sibling to spouse or colleague. Ginott (1965) and Ziman (1950) both feel that sibling rivalry may produce a highly competitive individual who is overaggressive in order to obtain prestige and security. Ginott gives examples of the man who has to win whether having an argument, playing a card game or driving his car. He feels that intense sibling rivalry is an indicator of urgent need for psychotherapy.

One reason why sibling interaction has received little attention from researchers or theorists is that parents and peers have been focussed upon as the major socializing agents, and the influence of siblings has largely been ignored. Possibly in our culture this view is valid, as with small nuclear families much emphasis is laid by the parents themselves on the individual parent-child relationship and on methods of child rearing. Outside the family the child tends to associate with age peers, again as a result of cultural institutions, e.g., school. However a large portion of each day is spent within the family circle, particularly during the pre-school years.

Siblings have a great deal of contact with each other, often involving activities which are not shared with other children, e.g., meals and bath time. The relations are continuous and private and thus of an intimate and frank nature, as feelings cannot be contained under these conditions. They have an important function in preparing the child for social relations outside the family, in learning to give and take and to accept the right of others and in self-definition or evaluation. Siblings fulfill a variety of different roles with respect to one another - they are companions, models, pacesetters, challengers and antagonists. They are closer in status than parents which permits freer expression of feelings, especially aggression but there is also opportunity for co-operation and companionship in play and other activities.

Given the importance of sibling influences in socialization, relationships that are largely competitive and antagonistic will
probably have adverse effects on the child's adjustment (present and possibly future). Although it is probably inevitable that some degree of ambivalence will exist, it is obviously more serious in some cases than in others, eg. in those cases referred to child guidance clinics. In order to properly assist such children as well as gaining a fuller picture of the child's early relationships, it is necessary to have information about the determinants of sibling rivalry.

Early interest in siblings was aroused by Alfred Adler (1927) who outlined the consequences of different birth orders and discussed the genesis of jealousy and rivalry. He placed great emphasis on the motive of "striving for power" and felt that "jealousy is an especially well marked form of the striving for power." Children develop jealousy in an attempt to be superior to one another and thus where they feel themselves neglected or discriminated against. He stresses the point that it is what the child feels about his position that is important. "It does not matter what has really happened, whether an individual is really inferior or not. What is important is his interpretation of his situation".

When a new child is born, Adler feels jealousy is inevitable because the older child feels neglected, like a "dethroned king." (This term has gained popularity and has often been used since then in discussions of siblings and jealousy.) However the first child has power because he is older, stronger and cleverer, and severe jealousy is unlikely. It is the younger children who will feel inferior and "are constantly striving for superiority under pressure" because there is already someone ahead who has achieved power. Adler feels that this is the situation which leads to rivalry and jealousy.

He acknowledges the importance of exact family composition, and variables such as the sex of the children, eg. girls are more likely to be jealous because of the preferential treatment given to boys. He states that while family situations repeat themselves there may be more than one behavioural result. Jealousy may take many forms, eg. ambition and achievement or fear of neglect and failure because of feelings of inferiority.

Adler's ideas were really the first statement of the dynamics of sibling relationships, and acted as a stimulus for further work in this area. They are an important departure from earlier psychoanalytic emphasis on the parent-child relationship. Sutton Smith and Rosenberg (1970) make an interesting comparison
of the theories of Freud and Adler in terms of their birth position. They point out that Freud, an eldest child, has concentrated on the relationships of child and parent and used the Oedipal complex in explanation, while Adler, a later-born child, emphasizes sibling differences and the drive for power and status.

In the 1930's and late 1920's several studies of sibling rivalry were carried out, e.g. Sewall (1930) and Levy (1937). These investigations concentrate on the immediate reaction of a child to the birth of a new sibling, this being the classic situation of jealousy arising because of "dethroning". Sewall (1930) compares a group of jealous and non-jealous children with one younger sibling, where jealousy was defined in terms of aggression towards the baby, or a change in behaviour assessed to be a reaction to the new sibling. She finds that a jealous reaction was observed more often if the child was between 18 and 42 months old when the sibling was born, if the mother was over-solicitous and if her discipline was inconsistent. The age of the mother and size of family were related to jealousy but were also related to the mother's attitudes, i.e. more jealous children were the eldest and had young mothers but mothers under thirty with small families were over solicitous. Where the mother was judged as neglecting of her children less jealousy occurred.

Levy's study supports these results. He found that the more dependent on the mother the child was when the sibling was born the more jealous he would be, and mothers who were over-protective had the most dependent children. He also found that the older the child was, the less likely he would be to show hostile or aggressive reactions.

The results of these studies are interesting but they are limited by their unsophisticated measures and statistical analysis (involving inspection of percentages without significance testing) and by the fact that they only concern the child's reactions to a younger sibling.

Following these studies there appeared several books and articles on the jealous child, e.g. Liss 1946, Podolsky 1954, Vollmer 1946 and Ziman 1950. These were directed mainly at parents and appear to be based on the author's own clinical experience. Some comments on the causes of jealousy are included
but the main purpose is usually advisory. Even Dr Spock includes advice on the dangers and handling of jealousy in his "Baby and Child Care".

All these writers describe jealousy arising from the child's dependence on the mother and the desire for exclusive rights over her. With the birth of a sibling the parents' attention must be shared and the child's status is threatened. The more dependent the child is, the greater the threat and the more jealous the child will be. They feel that maternal over-protection, not rejection, will foster jealousy in the child. They state that the eldest child suffers most from displacement because of the early exclusive relationship with the mother, but Ziman does draw attention to the situation of the middle child who has to suffer the resentment of the first and is, in turn, jealous of the next child.

While they feel that jealousy is inevitable several suggestions are made for minimizing it. Proper preparation of the child for a new sibling is thought to be important (although Sewall found that preparation did not distinguish between her jealous and non-jealous group.) Means of handling jealousy are suggested. These include accepting the child's feeling and allowing him to express them, involving him in the care of the baby to give him some period of individual attention. Thus these books give explanations and advice on a practical, common-sense level.

Other authors who relate maternal attitudes to jealousy are Garrison, Kingston and Bernard (1967). They feel that maternal rejection causes the child to perceive himself as unworthy, unwanted, unloved and inadequate and to be fearful, anxious and dependent. He will perceive "elements of the environment as a threat to portions of his existence". This self-centredness manifests itself in "inconsideration for the feelings of others and a tendency to compete for attention." He is not able to give affection to others because he has no pattern to follow and because he is too concerned with satisfying his own needs. They see over-indulgence and protection as compensatory forms of rejection which, because of insecurity, can lead to excessive jealousy, overassertiveness or withdrawal.
The fact that family structure is related to interaction patterns between members, and to characteristics of the children, is recognized by several writers eg. (Clausen 1966) He says that the important aspects are the membership composition, especially the number, sex and spacing of the children.

Bossard and Doll (1966) have carried out a number of investigations on family size with information mainly obtained from structured interviews. They feel that size influences interaction, attitudes and values of family members, and base their analysis on concepts of intensity of relationships and availability of resources. With increasing size there are more opportunities or targets for release of tension but less individual attention as parents must share their time among many. There tends to be a centralization of authority (Elder and Bowerman, 1963; found the father was more authoritarian in large families) with a delegation of power or authority hierarchy. In large families siblings form a cohesive group, depending on each other and spending little time with adults. In small families relationships between siblings and with parents are very intense. Children see their parents as their source of security and there is more competition for parental affection and a greater emphasis on individual development.

Waldrop and Bell (1964 and 1966) predict that differences in interaction associated with family size and density will produce differences in the characteristics of children of large and small families. In particular children from large dense families will receive less attention from the mother, because density affects the mother's contact behaviour and ability to alleviate anxiety producing situations, because of the competing needs of her children, regardless of her child-rearing methods. They confirmed this expectation by observing the amount of time the mother spent with each child. They also predicted and found that these children would show more dependency behaviour eg. attention seeking at nursery school. A later study investigated the effects of congenital factors, i.e. children from large, dense families were found to be more lethargic.
as neonates. They concluded that both congenital factors and availability of the mother are sources of dependency behaviour. These findings are rather at variance with studies reported later where the first child is found to be more dependent due to more intensive early nurturance but their assumption that dependency behaviour increases when dependency needs are frustrated is supported.

From the above it appears that family size affects both parent-child relationships and the nature of the sibling group. However there are contradictions between the findings. Waldrop and Bell found that dependency increased with family size while Bossard and Doll found that dependency on parents decreases and the relationship with siblings becomes more important.

Another group of studies on siblings, which date back to 1874, is concerned with ordinal position effects, i.e. relating abilities and personality characteristics to order of birth. While these studies are not directly relevant to the question of sibling relations they are important because they indicate that children in the same family will have different characteristics, which may influence the way they interact with each other and the attitudes each will hold. Also these studies, particularly the more recent ones, are based on certain assumptions about family interaction and their findings give support to these theoretical propositions (although this may be seen as somewhat circular reasoning).

The amount of work on ordinal position effects is vast and several reviews have been published, eg. Altus 1966, Sampson 1965, Warren 1966. The early studies were mainly of the survey type demonstrating the preponderance of first borns in positions of eminence or with high academic achievements. More recent work was stimulated by Schachter's (1959) findings of ordinal position effects in need for affiliation and his analysis of his results in terms of different parent-child relations for different ordinal positions. The emphasis in these later studies is on variables such as dependency, conformity and achievement need. Those findings which have both relevance for the present study and substantial support in the literature are outlined below. Ordinal position differences in other variables, eg. mental illness, volunteering and empathy
have not been clearly demonstrated and will not be discussed here.

All the reviews mentioned above conclude that there is substantial support for the greater intellectual achievement of 1st born compared with later born children. This is evidenced by the fact that more 1st born have attained positions of eminence (first shown by Galton in 1974) and there is over representation of 1st born entering college. Later studies, eg. Schachter 1963 have replicated these findings and have controlled for the incidence of different ordinal positions in the population. There are some contradictory findings regarding birth order effects on IQ but Altus (1966) concludes that there are differences in favour of the 1st born at high levels of intelligence. One of the studies he quotes is that of Terman (1925) who studies gifted children with IQ's of 140 or higher and found that the eldest were the most numerous in this group. A recent investigation carried out by Adams and Phillips (1972) supports earlier findings of differences in intellectual achievement but these differences disappear when level of motivation is held constant. They conclude that the higher IQ of first borns is explained by their greater achievement need which they feel is fostered by parental expectations.

Schachter's (1959) experiments on affiliation are well known. In order to study the relationship between anxiety and affiliation he provided an anxiety producing situation, i.e. the expectation of taking part in an unpleasant experiment, and allowed his subjects the choice of waiting alone or with others. His unexpected finding was a definite trend for 1st born S's to choose to be with others and for later born S's to prefer to wait alone. Thus, under conditions of high anxiety, first borns show stronger affiliation need.

He made a careful analysis of his results to see whether other factors, eg. differences in anxiety level or family size, might account for his findings. He found that the level of anxiety was higher for first borns, i.e. the situation provoked more fear in them, but with the level of anxiety held constant the relationship between ordinal position and affiliation still holds very strongly. First borns show greater non-affiliation whether from small or large families but the level of anxiety was higher in all
S's from small families. He concludes that family size determines the individuals level of anxiety but ordinal position determines affiliative tendencies. In an analysis of the effects of exact ordinal position, he finds that the preference for the company of others in an anxiety-provoking situation is precisely related to birth order.

Schacter's work was the forerunner of several studies seeking to replicate his results. Warren (1966) reports that later studies have produced conflicting results. He feels that there is support for first born women showing affiliative behaviour under stress but proposes an alternative explanation for the S's desire to be with others when anxious. He feels that the main function of their behaviour is information seeking rather than true affiliation. Ring Lipinski and Braginski (1965) also feel first borns have a greater need for self-evaluation, i.e. in conditions of uncertainty they rely on others to define the situation for them. They base this conclusion on a finding that first borns are significantly more influenced by others in an ambiguous situation.

Sears (1950) reports the findings of several unpublished studies mostly concerned with ordinal differences in dependency. Dean (1947) took same-sex sibling pairs and obtained the mother's ratings of her children's behaviour. They reported that the eldest child was more dependent, worried and excitable. Their feelings are hurt more easily, and they are less effective in protecting themselves from verbal or physical attack. Gewirtz (1948) obtained teachers ratings of nursery school children on scales which covered seeking help, attention and praise from teachers or peers. She found that second and later born children showed less dependency behaviour than first and only children, and differed in the type of dependency behaviour shown. First borns seek reassurance and bodily contact, (and also show the least aggression) middle borns children show negative attention-getting.

As Sears points out these are pilot studies, the samples are small and the results are not all statistically significant, although consistent. However later studies
support these early findings, e.g. Haeberle (1958) and Hilton (1967) both using observational ratings of the child's behaviour, found that first born showed significantly more dependent behaviour than later borns.

The finding that the eldest child shows least overt aggression is supported by Pauline Sears (1951) in her study on doll play aggression. Possibly related to this the first child has a more highly developed conscience (Sears Maccoby and Levin 1957) i.e. does not act aggressively because this has been forbidden.

After reviewing many studies, Warren (1966) concludes that there is substantial support that "first born of both sexes are more susceptible to social pressure and are more dependent than later born".

A major point of criticism of ordinal position studies is that they give very little information other than of a descriptive nature. Birth order, usually regarded as a sociological variable, is causally distant from behaviour or personality and on a different level of complexity. Hoffman and Lippitt (1960) in their causal sequence schema, list parental characteristics, attitudes and behaviour and the child's perceptions of that behaviour as variables intervening between family composition and child behaviour. The effects of these variables is assumed only and so these studies give little information about psychological processes involved in socialization.

Altus (1966) points out that birth order effects are seldom unitary and the exact sibling status is important, i.e. sex of child and siblings exact position and age relation. These factors are usually uncontrolled and the classification of ordinal position varies, eg. first vs later born or first vs youngest. Schooler (1972) criticizes these studies because they often do not take account of population trends, eg. the fact that first born are over-represented in the population.

Kammeyer (1967) feels that these studies abound in the literature because birth order is such an accessible datum. He feels the research is basically non-theoretical, with ad hoc interpretations, and many serendipitous findings;
the net result being a body of "disparate, disconnected" studies.

Most authors agree that ordinal position as such is meaningless as a psychological variable. It is only of value if interpreted in terms of differences in experience of individuals of different birth orders or seen in terms of the meaning of ordinal position to be child, siblings and parents.

Sears (1950) notes that there are two general approaches to the study of the family. The sociological views the family in terms of its structure, the roles of the members and its status as a group. The psychological approach takes the individual as the unit of study and views the family as a social structure which the individual is placed in and within which he interacts. It forms an environment which instigates and manipulates behaviour. The family 'is a description of the conditions for learning of a child born into that family.' (p 398)

He feels that a synthesis of the two approaches will allow generalised statements of cause and effect. Because the characteristics of different family roles are consistent he feels that the 'role itself may be used as an index of the occurrence of certain behaviour and certain learning experiences.' Thus differences in ordinal position may be attributed to uniformities of experience which mould personalities into particular ordinal "types".

Sears et al 1957, after finding ordinal position differences in child and parent behaviour, attempt a further analysis of the origins of ordinal position effects. They feel that ordinal position is part of the stimulus value of the child for the mother. There exist "pervasively culturally determined attitudes about the nature of privileges and responsibilities of children in different categories." These influence the mother's behaviour and expectancies of her different children. Thus ordinal position is an "index of common cultural factors" which will instigate consistent patterns of child-rearing. They note that factors other than role expectancies, eg. increasing experience of parents will contribute to different treatment received in different ordinal positions.

Most writers agree with the above analysis, ie. viewing
ordinal position effects in terms family interaction with a stress on differential parental treatment and resulting differences in social learning experiences. Sutton-Smith, Roberts and Rosenberg (1964) state that "position typing" must be the result of different learning experiences. They point out that position and sex typing are culturally adaptive as in a complex society there are many specialized roles to be filled. Altus concludes that the most prominent cause of ordinal position effects is differential parental treatment and expectations. Schachter (1959) feel's that these effects "must be a result of differences in child-rearing practices as related to ordinal position and of the different consequences of having older or younger sibs around." Sutton-Smith and Rosenberg (1970) feel that parental influences are especially important with the first born and lead to differences in eminence, college entrance, achievement affiliation, conformity and dependency which mark the first born compared to later born children. One alternative explanation may be mentioned here,ie. that ordinal position effects result from physiological differences. Warren states that differences in intrauterine and perinatal influences have been used to explain birth order effects. He quotes a study which found later born children to be more lethargic during the neonatal period.

Differences in parental experience, role expectations and amount and intensity of interaction are used to explain the ordinal position differences already outlined. Dependency is dealt with first because it is often felt to be the root of other ordinal position differences, eg. affiliation. Following Sears et al (1957) and Bandura and Walters (1963) emotional dependency develops because of the mother's fulfilling the child's biological needs. The mother's presence becomes associated with alleviation of discomfort etc and the child learns to behave so as to obtain her attention and affection. Thus dependency behaviour is established through early reinforcement. Where frustration occurs or where there is conflict over displaying dependency behaviour the motive will be strengthened. Sears et al feel that the lessening of attention to the child at about 2 years will cause conflict to arise. Sears 1950 feels that the parents treatment of the first born will produce a stronger
dependency motive in this child. Schachter 1959 is more specific in his formulation. He feels that as parents are inexperienced with their first child they will be "more ill at ease and more worried" and they will respond to "more signals more quickly." At the same time they will be employing trial and error procedures and thus will be inconsistent, leading to frustration of dependency needs and arousal of anxiety. Thus parents are more effective "anxiety reducers" with their first born and at the same time produce anxiety in the child. Schachter feel these conditions will make the eldest child highly dependent on others, 'as sources of approval, support, help and reference.' Later born children have less of the parents' attention and are treated more consistently and are, therefore, less dependent.

Parents expectations of their first born are also thought to influence ordinal position effects. Parents are assumed to have higher expectations of achievement (Adams and Phillips 1972) and responsibility (Sears et al 1957, Sampson 1965) with their first child. While these expectations and pressures do seem to produce a more achievement oriented and responsible child they also contribute to the development of greater dependency in the first born. Sampson (1965) points out that parental expectations may produce a "dependency conflict" as they are incompatible with dependency behaviour. He argues, (referring to Sears et al 1957) that this conflict will tend to increased dependency responses.

Ring et al (1965) feel that the child may not be able to live up to his parent's high expectations. This will cause low self esteem which is correlated with dependency (Finneran 1958). They also propose that the inconsistent treatment of first borns has more far-reaching results than frustration and anxiety arousal. As an individual's self-concept is based on others' reactions to him the parental inconsistency will lead to a confused self concept making him dependent on others for self-evaluation.

From the above it can be seen that there has been a general emphasis on defining the position of the first born in contrast to all later born. (One author, Neisser 1957) has produced a book solely concerned with eldest child)
However Schachter found exact ordinal position effects for anxiety and affiliation so it may be argued that these processes act in a continuous way.

While these are speculative assumptions introduced by researchers to explain their birth order findings there is research evidence of differential parental treatment and attitudes towards children in different ordinal positions.

Joan Lasko 1954 took her data from the Fels population, specifically the information given by the Fels Parent Behaviour Rating Scales. From this she was able to compare the mothers behaviour to her children at the same age from one to nine years old. She found that that the mother was initially warm and child centred with her first child but from the age of three or four there is a change in the amount of interaction and a lessening of warmth. This child is subject to greater verbal stimulation and intellectual acceleration than later children. Disciplinary friction is higher, especially at 5 years. The second child has a more stable environment. If he is displaced by a third child before he is four, the mother's behaviour follows the pattern shown to the first but not if he has reached four years. The youngest child in the family, ie whether 2nd or 3rd is shown more protection and less acceleration and treated more restrictively, although warmly. Lasko concludes that parents are consistent in their child-rearing practices but the emotional relationship with each child may differ.

Sear et al 1957 report that parents are more likely to be "delighted" about the first pregnancy, ie 62% vs 34% for later pregnancies. However they are more likely to be pleased about a later pregnancy if the children are widely spaced. The oldest is twice as likely to be breast-fed and later children are weaned earlier and more severely. Both parents have more time for the first born and this is the only child that the father is significantly involved with. They generally become more indulgent and permissive with later children but do restrict them from "annoying" adults. In large families, the youngest is particularly indulged while the middle child is given less time, praise or pressure than any other. There is no difference in permissiveness
for aggression to parents or peers but significantly more freedom is given to the eldest to quarrel with his siblings.

Cushma 1966, by analysing responses to the Vineland Social Maturity Scale concluded that the mother's expectations were much higher for first borns, especially males, than for later borns. They were more active in prompting and helping the first born, being supportive and cautious in directing boys and more demanding and exacting with girls. These findings accord with those of Rothbart (1971). In an observational study of mother-child interaction, where the child was given a task to complete, mothers were found to place more pressure for achievement on the first born. They interacted more with them showing a quality of 'anxious intrusiveness'. They were more extreme with girls and offered more complex explanations to boys. Rothbart interprets this in terms of the mother feeling attraction to the boy and rivalry with the girl.

Hilton (1967) felt that differences in behaviour associated with birth order are caused by differences in dependency, with the first born being more dependent than later born children. She points out dependent behaviour, ie using others as sources or support and reference is not incompatible with independence and responsibility. She carried out a controlled observational study of mother-child interaction to determine whether there were differences in parental behaviour towards the first born which would produce greater dependency. She found that three aspects of the mother's behaviour, ie. interference, immoderation and inconsistency varied with the ordinal position of the child. Mothers of first born children were more involved, more likely to interfere, to initiate activity, and to give direct help even when they had been told not to. They were more extreme in affect, ie. whether making supportive or critical comments, and were more likely to make overt demonstrations of love. With a first born child the mother's behaviour was more likely to change depending on the child's performance, ie. if told the child had done well, she increased her demonstrations of affection and vice versa, if told the child had done poorly. With later
born children, the mother was less affectionate but more consistent. Hilton feels that where a mother is interfering, and inconsistent the child does not learn to set his own standards. He will rely on others to set his goals and evaluate and reward his behaviour. This the first born is more likely to be exposed to attitudes and behaviour which produce dependency.

Another study which suggests that the parents behaviour is not the same to all the children in the family is one where siblings' concurrent perceptions of parental attitudes are assessed. Armentrout (1970) used Schafer's "Child's Report of Parental Behaviour Inventory," with respect to mother and father and correlated siblings' scores on acceptance, autonomy and firmness of control. He obtains small, non-significant, negative correlations (-.132 & -.241) of degree of acceptance of mother and father. Fathers are seen as being consistent in the degree of autonomy they permit and mothers are consistent in firmness with each child. However he feels that the lack of relationship between the degree of acceptance perceived by siblings "emphasizes the complexity of parent-child relationships" and may indicate that favouritism exists, if not in fact certainly in terms of the child's interpretation of parental behaviour.

Evidence of the first borns greater interaction or concern with parents is seen in studies using the child's response to projective tests as well as in the observational studies already reported. Helen Koch (1956) reports that 1st borns have fewer sibling interaction themes on the CAT. Houston 1968 administered the Family Relations Test to boys from two child families who were aged between 5 and 11 years. He found that the first borns gave more messages to parents than the second born child and received more positive incoming feelings from mother. Second borns evidenced more interaction with their sibling including more negative incoming and outgoing feelings regarding them. Thus this study demonstrates the higher involvement of parents and first born and also produces the interesting finding that for the ordinal position where there is greatest interaction with siblings there is also the greatest conflict.

So far evidence has been presented to show that the child is subject to certain experiences resulting from differential parental treatment of children in different
ordinal positions. However parents are not the only significant figures in the child's family environment and several writers have expounded the importance of sibling influences. Sutton-Smith, Roberts and Rosenberg (1964) criticize the "overstress on primary socialization as the critical learning experience and the reason for the differences which occur between the different ordinal positions." They feel that not only do later socialization procedures by adults contribute, but that the influence of siblings is seen in 'position and sex typing', the important factors in the sibling relationship being sex and power. Sutton-Smith and Rosenberg 1970 reiterate that although most work shows how parents make siblings different there is evidence that siblings also make each other different. They feel that it is an important research task to investigate these patterns of immediate influence and the character of resulting interactions and responses.

Kammeyer 1967 proposes that there are three interactional relationships which must be considered for each child, and the nature of these will vary according to the child's ordinal position. These are the relationship between child and parent, child and sibling, and child, parent and sibling. The features of the parent-child relationship are those already discussed, i.e. the significance of the child, differences in time ardour and experience, and the greater exposure of the first child to adult models and expectations. In inter-sibling relationships the first child will play a 'super-ordinate, parent-surrogate role' relative to the later born. He will be a source of threat and anxiety to the younger child (also proposed by Schachter 1959). The later born will experience stress situations vicariously and will learn much of social behaviour from child models, i.e. older siblings. In three way interaction between parents assign responsibility to the first born which makes him a 'foreman' to his siblings. The first is displaced but the parents try to 'make-up' to him and the later born have always to compete for parental attention. He states that these
patterns of family interaction receive support in the literature, and feels that they result in the different social learning experiences which account for ordinal position differences.

Ideally studies of sibling interaction need to take account of the exact sibling status of the child, i.e. sex, position, sex of sibling, and the size and density of the family. Even in a two-child family there are eight sibling statuses, which explains the paucity of studies which control for all the above variables. However there are several findings which can be interpreted in terms of sibling influence and a few investigations, notably those of Helen Koch, which are extremely systematic and well-controlled.

In their large-scale survey of childhood behaviour and mental health Shepherd, Oppenheim and Mitchell (1971) provide evidence that the presence of siblings can influence the child's behaviour. Children with younger siblings, especially the eldest showed significantly more deviant behaviour (assessed by mothers ratings on various scales) than youngest or only children. The proportion of 1st borns with a high total deviance score increases with family size, i.e. they found that the most deviance-prone group were eldest children with four or more younger sibs. The sex of siblings, and the presence or absence of siblings of the same sex did not affect the total deviance score. However age may be relevant as girls under 11 who were the eldest of the family had a significantly higher deviance score than their counterparts of 11 and older. Among boys the difference was smaller and not significant.

The authors suggest that the pressure of the presence and activities of their younger siblings could lead to temporary behaviour problems in young school children. These children would be under stress because the younger ones remain at home and monopolise the parents attention. As additional support for this proposition is the finding that birth order is related to improvement in disturbed behaviour. In a two year follow-up of child guidance clinic cases they found that disturbance was most likely to persist in last born children - twice as often when
compared with the oldest child. Middle children were in an intermediate position as regards improvement. This is particularly marked among children who were under 11 at the time of the original interview. With older children the presence of younger sibs is not significantly associated with improvement. Thus sibling influence does not appear to be an important determining factor of the older child's behaviour but does seem significantly related to the behaviour of the younger child.

Helen Koch has carried out a series of investigations on five and six year olds from two child families, comparing groups of each sibling status over different spacing ranges. She has obtained information based on projective testing and ratings of nursery school behaviour. She finds that the child's behaviour and attitudes are influenced by his sibling's characteristics, eg. boys with sisters show more feminine qualities and girls with brothers are more 'tomboyish'. First born children are more emotionally intense, anxious, defensive, react violently to defeat in competition and are concerned about their status. She finds that the two to four year spacing is "particularly stimulating and stressful" especially for opposite sex pairs. The first child with a sibling 2-4 years younger shows greater hostility, competitiveness, jealousy and insistence on rights. The exception is the girl with a younger brother whose jealousy is greatest at the closest spacing. This child has the highest rating on jealousy and rivalry of all the sibling positions, despite the age gap. For the later child the older sibling may be either stimulating or overwhelming, eg. the boy with an older sister has a sibling who is rated high on jealousy and dominance, and sex identification conflict is likely to be high except at the widest spacing. This child is rated less friendly and popular, less insistent on rights and more selfish than children in other positions. A girl with an older brother, on the other hand, although threatened directly by him because of his greater favor, skill and strength, develops more socially positive traits, ie. is more popular, self-confident, competitive and tenacious. The first child shows more
hostility, jealousy and competitiveness with an opposite sex sibling and later children show these traits if the older sibling is of the same sex.

Koch (1956) concludes that status and affectional concerns are the chief sources of motivation for competition. The first child's intensity and insistence on rights probably stem from displacement. The child becomes concerned with defending his/her status and rights concerning the mother, with respect to the younger child who is still at home and taking up much of the mother's attention. This particularly so where the difference in treatment is greatest, i.e. with opposite sex pairs. If the spacing is wide the child is sure of his relationship with his mother and has "more mature social interests." Thus he shows less hostility and more positive social attributes and because he has his own playmates and concerns, he will be less threatening to the younger child.

The second born child shows more hostility when his sibling is of the same sex and Koch explains this in terms of the amount contact occurring, i.e. if the children are boy and girl they are unlikely to play together as the older child will have an established group of friends of his own sex with their own interests. If they are of the same sex the younger child is more likely to 'tag along' and to be placed with the older one by the parents. They are likely to have more competing interests, spend more time together and be compared more. Here conflict arises over personal characteristics rather than sex differences. Opposite sex pairs may show more "open rivalry" because of the rejection of the sibling as a member of a different 'class'. However Koch (1955) feels this is more limited in scope, less threatening and she implies, healthier than rivalry between same sex children.

The findings of these studies indicate that attitudes and behaviour of children can be related to their exact sibling status, i.e. to characteristics of their siblings and cannot be explained simply in terms of ordinal position. Also the attitudes and characteristics of sibling pairs are complementary. This indicates that Helen Koch's investigations
do 'probe sibling interaction' (Irish 1964) and illustrate the importance of sibling influences in addition to parental influences.

Three studies reported by Sutton-Smith and Rosenberg (1970) are directly concerned with the character of interactions between siblings. Sutton-Smith, Rosenberg and Houston (1968) administered the Family Relations Test to 7-11 year old boys. They found that same-sex siblings showed significantly more positive responses to, and intake from, siblings than did opposite sex siblings. Where the boys had sisters they showed more concern with self and fewer messages were given or received from siblings. This supports Helen Koch's supposition that opposite sex siblings have less contact.

Sutton-Smith and Rosenberg (1965) questioned children on how they influence and were influenced by their siblings. First born are perceived by first and second born children as being more bossy. The later child appeals for outside help to achieve his end, except for the boy with an older sister who uses direct physical power, blackmailing etc. Orbach (1966) also used direct questioning of siblings. He found that males feel the younger child has more fun, while females think the elder has most fun. Later born are seen as tale-tellers. The reason given for conflicts by first borns is that the younger child damages his property, while later borns complain of interference by their sibling. To get what they want, first borns use their status, attack or bribe while later borns resort to pleading.

Sears et al. 1957 found that the most common kind of sibling quarrel was a dispute over who was to play with a particular toy. Koch (1956) dismisses concern over possessions as being the root cause of conflicts but it is quite conceivable that this may provide the immediate stimulus for dissension. An interesting finding was that mothers reported significantly more quarreling with siblings by middle and youngest children, although the mothers of oldest children tended to be more permissive of this behaviour. This finding is a reversal of the general principle that high permissiveness for aggression results
in more aggressive behaviour. It leads them to propose that some of the child's behaviour is based on the social structure of the family rather than specific child-rearing practices. They put the following hypothesis, that "relatively greater amounts of frustration and discomforting control in a family come from the persons who are immediately above the child in the power hierarchy than from other family members, and regardless of the parents permissiveness or punitiveness, the younger child tends to be more aggressive towards those persons."

Pauline Sears (1951) in her study on doll play aggression with 3-5 year old children found that while boys showed more aggression to boy dolls, girls were equally aggressive to boy and girl dolls. She comments that the girls felt justified in giving more aggression to the boy doll because boys were seen as 'rough' and they had suffered frustration at their hands. It is quite likely that the aggressive acts to the boy dolls would not be repeated in the real life situation for fear of reprisal, etc. but it does seem to indicate feelings of hostility towards male siblings. This supports Sears, Maccoby and Levin's analysis of aggression being directed towards frustrating agents but would necessitate an extension of their hypothesis to take account of the characteristics of the members i.e. sex and power in addition to their position in the family hierarchy.

Is it possible to discuss sibling relationships, i.e. the attitudes and behaviour of the child in relation to his brothers and sisters, in terms of a social learning, developmental or interactional framework. The social learning approach focuses on the role of the parents as shapers of the child's behaviour, through reinforcement and modelling, and on the effect of frustration which inevitably arises in family life.

Bandura and Walters 1963 state that the first response to frustration is aggression but other responses may be shown depending on the child's learning history. At the same time the motivational level of the individual increases and he will respond more vigorously. To apply this to the family situation, dependency is established in the young
child through early satisfaction of biological needs. The child learns to behave so as to ensure the receipt of nurturance and warmth and uses dependency behaviour to gain reassurance about the mother's love (Sears 1957). As the child gets older the mother begins to consider this behaviour 'change-worthy' and no longer consistently reinforces it. In addition, if there is more than one child she must share her attention between them with inevitable frustration of the child's dependency needs.

As a result the child intensifies his efforts to gain dependency rewards and feels hostility towards the frustrating agent, i.e. mother. However aggression to parents is punished and therefore it may be displaced onto the sibling (punishment inhibits aggression to the punisher but increases it to others). Sibling aggression is probably reinforced by parental attention.

Regression is another common response to this situation. This occurs if age appropriate and inappropriate responses differ little in strength, if the latter had prolonged intermittent reinforcement and if age-appropriate responses are a source of threat. The older child may imitate the younger because he is seen to be rewarded for his behaviour.

Bandura and Walters note that the development of self control, e.g. ability to tolerate delay which would make the presence of siblings less stressful, is mediated by the parents. They feel that the child develops greater self control if he experiences relatively early or severe socialization pressures than if the parents are lenient.

Thus the child's response to his sibling, in particular hostility, is a result of parental handling in terms of development of dependency, amount of frustration introduced and punitiveness.

In psychoanalytic theory sibling rivalry is seen as an internal conflict which is 'acute', i.e. caused by the pressures of the developmental stage which the child is passing at the time (Smirnoff 1971). It is inevitable difficulty, but 'phase-bound', i.e. probably transitory. It is the 'legitimate task of the child's ego' to deal
with these crises and normal development is only endangered is unsuitable solutions are resorted to.

Anna Freud (1966) states that the tolerance of a sibling depends on the child's developmental level which determines the psychological meaning of events for the child. The young child is egocentric, i.e. all the parents actions are seen as having reference to him. The birth of a sibling is seen as 'unfaithfulness' and the child reacts with hostility and disappointment. His misapprehension of events is due to his weakness in secondary process thinking, e.g. differences in the evaluation of time which means that he cannot tolerate delay. When the child is very young any disturbance of the mother-child unity will produce separation anxiety. In the toddler stage the child's feelings towards the mother are ambivalent and the arrival of a sibling may disturb the balance and lead to aggressive behaviour. In the development from egocentricity to companionship others are at first seen only as disturbers of the mother-child relationship and thus as rivals. Gradually they are recognized and reacted to as individuals and their rights and wishes are acknowledged.

Anna Freud feels that extreme jealousy which she sees as a normal element of infantile instinctual life can only be modified when the ego is mature enough to institute appropriate defenses.

Erikson (1963) feels that during the stage of development the child is concerned with keeping rivals out, i.e. younger siblings. During the stage of initiative there is anticipatory rivalry of those first there, i.e. older siblings which climaxes in the contest for the opposite sex parent. From consideration of the Oedipal situation one might expect greater rivalry with siblings of the same sex as the child.

The views of Anna Freud and Erikson are felt to constitute a developmental approach to sibling rivalry. The child's reaction to his siblings depends on his developmental level, in terms of the relationship with the mother and his own capacities for coping with the situation. Following this view, later manifestations of jealousy and
rivalry would be traced back to an earlier developmental stage.

An interactional framework is more complex than the stimulus-response approach, eg, one cannot say that there is a simple cause and effect relationship between the mothers behaviour and the child's personality, ie. parent effect model. One must also take account of the child's behaviour and characteristics, eg. sex and ordinal position, and their effect on the mother's behaviour. Similarly all relationships within the family must be viewed in terms of the behaviour and characteristics of both parties.

There are two ways of looking at the interaction between siblings. The first, which is most often implied in the literature, is the proposal of a three-way interaction involving both siblings and parents. In other words the relationship between the siblings is mediated through the parents, ie. the child's needs and feelings towards his parents and their different expectations, attitudes and handling of each child will determine the behaviour and attitudes the siblings hold towards each other. The other idea is of direct two-way interaction between siblings where their characteristics and status influence the nature of the relationship.

In the literature there is evidence for both proposals. There is evidence of differential parental treatment of children in different positions in the family and of resulting differences in relationships with parents, which influence the way the sibling is viewed and reacted to. Bene and Anthony (1957) state that rivalrous children gave parental preference as the reason for hostility towards siblings. The most common explanation of jealousy is in terms of the child's dependency on the mother, the inevitability of dependency needs being frustrated because the mother must share her attention among the siblings, with resulting resentment of the sibling, possibly because aggression is displaced from the parents to whom it cannot be shown. This employs the first model of attitudes and behaviour to siblings being mediated through the relationship with the parents. If this idea is correct then the important variables in determining the amount of jealousy will be strength of dependency, which is related to the child's age and maternal attitudes and behaviour.
The reviewed literature has indicated that the first child is more dependent, relying on parents as sources of self-evaluation and reward, and as anxiety reducers. It has also been shown that the parents show higher initial concern with the first born which serves to establish strong dependency, followed by a lessening of warmth as the child grows older which tends to further increase dependency behaviour. The strong pressures and expectations regarding achievement and responsibility also turn the eldest child to the parents for reward and approval. Thus, because the first child has more vested interests in the parents, one would expect this child to show most jealousy after displacement, under the parent-sibling interaction model.

Research has also indicated that the interaction between siblings can be directly related to the characteristics of the children, eg. age, sex and other personal characteristics, eg. Koch (1955,1956). If one views the family as a hierarchy with each member having certain power because of age, ascribed status and even physical characteristics then it follows that this will influence the relationships between members. This view is consistent with the findings of Sears et al (1957) regarding aggression between siblings and their hypothesis about family structure effects. Orbach's findings (1966) also indicate that position or status influences the type of behaviour each child experiences from the other, ie. the older child is more bossy and interfering while the younger also presents annoyances but has less direct power. Koch (1956) also feels that while the elder generally can exercise more control he has to deal with uncontrolled and unpredictable behaviour from his younger sibling. Koch points out that the characteristics of the children not only influence the type of interaction between them but also the quantity in terms of opportunity for contact. She feels that this will affect the amount of friction occurring. This is born out by other studies, eg. Houston (1968) who shows that where there is greater concern with siblings there is also more hostility.

When viewed in terms of sibling influence jealousy and rivalry are seen as arising because of the value placed
on status and power and the frustration of attempts to gain them. It follows from this that jealousy will arise only when a child is old enough to perceive and be perceived as a person whose characteristics and influence are felt. Evidence for this is Bene and Anthony's findings (1957) that no negative attitudes were held towards the baby and Pauline Sears (1951) also found no aggression directed to the "baby" figure.

It is quite feasible that the two models of sibling interaction are not mutually exclusive. The immediate reaction to a new sibling may be seen as a result of interference with the parent-child relationship, i.e., displacement, and later interaction may also be affected by the competing needs of the children with respect to the parents. However the later relationship between siblings is probably no longer primarily regulated by the concern of each with the parents but more in terms of direct influence and interaction. Cognizance must be taken not only of the object of jealousy but of the socializing role of all family members. A formulation which takes account of all types of relationship and the influence of all family members, i.e., in terms of a family "gestalt," may be the most satisfactory.

Aim: To conduct an empirical study to clarify the present contradictions and uncertainties about sibling rivalry, to test certain hypotheses and to make a descriptive analysis of the data.

The literature abounds with contradictory proposals about the nature of sibling interaction and the causes of sibling rivalry. It must be stressed that apart from a few early studies on sibling rivalry there has been little research on sibling relationships. There are no recent investigations concerned with sibling rivalry and the only information on this topic must be gleaned from studies that are only indirectly related to it and from unsubstantiated theoretical formulations. Thus it was decided to conduct an empirical study to gain information about the correlates of jealousy and rivalry. Several variables have been chosen for study because there seems general agreement
on their relevance to the problem, i.e. maternal attitudes, family composition variables and the child's perceptions of family relations. Certain hypotheses have been put forward but note has been taken of conflicting propositions. In addition to testing these hypotheses a descriptive analysis of the data will be carried out.

There are indications that the mother's handling of her children influences their personality development and interaction within the family, therefore the study of maternal attitudes has theoretical and practical importance. Bunch (1960) notes that although correlations between attitudes and child behaviour do not allow the assumption of a causal relationship, such a correlation serves to differentiate between groups and shows which attitudes are the important ones to study.

Hypothesis I: Maternal over-protection will be significantly, positively related to sibling rivalry.

This prediction is made because maternal over-protection is thought to foster dependency on the mother with resulting intolerance of the sibling's conflicting claims. This is proposed by several writers in the reviewed literature and is supported by the results of Sewall (1930) and Levy (1937). In addition the mother's attitude towards discipline may be important as this fosters early self-control (Bandura and Walters 1963) and influences the amount and direction of dependency and aggression exhibited (Sears et al 1957). Rejection is generally thought to be negatively related to jealousy (e.g., Sewall 1930) and where there is less individual attention, as in the large family, the siblings form a more cohesive group (Bossard and Hol 1966). However rejection may be compensated for in over-indulgence and protection and Garrison et al (1967) argue that this is why the latter attitudes produce jealousy in the child.

Hypothesis II: where the child perceives that his parents have little positive regard for him he is more likely to show jealousy and rivalry towards his sibling(s).

The child's own perception of the family relations forms the closest link with his behaviour (Hoffman and Lippitt 1960). It is assumed that the child's perception of parental attitudes is more likely to be motivating his
behaviour than any objective assessment of these attitudes. The above hypothesis follows from the three-way parent-sibling interaction model where the child is seen in competition with his siblings for parental nurturance and warmth. Thus if the child feels he is not receiving "dependency rewards" he is likely to increase his competitive efforts and to feel resentment or displace hostility from parents to siblings. (In the direct sibling influence model perceived parental attitudes should not be related to rivalry.)

In addition the data from the Family Relations Test provides a cross-check of other measures, i.e., maternal attitudes and the sibling relationship score. It also permits the relating of feelings given to and received from any particular sibling with the characteristics of that child.

Family composition factors are easily measured and thus can be used to provide "hard facts" about jealousy, e.g., does it vary with family size? etc. In addition family structure provides information about the stimulus value of the members for the child and for the parents in terms of sex, age and position. As family composition variables are causally remote from the child's behaviour (Hoffman and Lippitt 1960) they do not possess a great deal of explanatory value but they can be used to test conflicting propositions. The variables which have been considered are ordinal position, family size, sex and spacing.

Hypothesis III: Sibling rivalry will be significantly greater when the child has been displaced than when he has no younger siblings.

If the child is jealous because the other child is receiving parental attention, etc., i.e., because of frustrated dependency needs, one would expect the displaced child, i.e., with younger siblings, to show most jealousy and rivalry. (In particular the first child, because of his greater dependency and concern with parents.) Although this proposal receives most support in the literature there is an alternative proposition. If jealousy results from status
envy and frustration of power striving then the later children will show more jealousy because they receive greater frustration from their more powerful siblings.

Hypothesis IV: Sibling rivalry will decrease as the spacing between the siblings increases.

Sewall (1930) found the 18-42 month spacing was associated with jealousy and Helen Koch also feels the 2-4 year gap the most stressful. This is interpreted in terms of the older child's strong dependency needs when the sibling was born, making the sibling a rival for the parents' attention. The spacing factor can also be seen in terms of the amount of contact and conflicting interests likely to occur between the pairs.

Family size determines the amount of attention each child receives and the intensity of relationships within the family. Waldrop and Bell's finding (1964) that lack of attention in large families increases dependency behaviour leads to an expectation of greater rivalry in large families because of competition for parental affection. However Bossard and Boll (1966) found that the lessening of intensity of parent-child relationships produced greater sibling solidarity. Also, with the strong authority hierarchy found in large families there may be less chance for the balance of power to be upset, e.g. by appeals for outside help, and therefore less friction arising.

It is difficult to relate the sex of the siblings to the parent-sibling interaction model unless, possibly, in terms of the Oedipal situation, i.e. greater rivalry will be expected between same-sex siblings because of competition for the opposite-sex parent. Parental preference for male or female children might contribute to sibling rivalry but evidence that such preferences exist is scanty and contradictory. Sutton-Smith et al.'s (1968) finding of significantly more positive feelings given to and received from same-sex siblings (boys) seems to argue against the influence of the Oedipal situation. Koch (1956) argues that an opposite-sex sibling induces more "open rivalry", although there may be less contact between the children, which is supported.
by the Sutton-Smith study. When viewed in terms of sibling's power and ability to act as a frustrating agent possibly male siblings may induce more rivalry but sex must be viewed in relation to position.

It is felt that there is no one situation or factor producing jealousy or influencing the sibling relationship. It is hoped that this study will help to "narrow the field" by demonstrating which are the most important variables to consider and by producing hypotheses about their mode of operation.
As the present investigation is envisaged as an exploratory study or sample survey the comments of Sears el al (1953) on the nature and function of pilot studies will be examined. These comments are relevant as they view as "pilot studies" all investigations that are not so carefully controlled that they demonstrate a well-defined causal relationship between one variable and another. They state that a pilot study involves the measurement of several antecedents and consequents, with the selection of variables based on usefulness, availability of measures and relation to a larger theoretical framework. The functions of such a study are to refine variables, i.e. by clarifying relationships between them and by using several measures of the same variable; to gain information about the generality of relationships, i.e. to gauge the influence of varying degrees of the antecedent variables; to explore new antecedent-consequent relationships within a theoretical framework. The findings of such a study will be reported as hypotheses rather than principles. They note that most research in psychology falls in this category. It is felt that the present study fulfills these conditions and should be classed under this heading.

Subjects.

The subjects were fifty pre-school children attending the Barkly House and Buxton nursery schools. The subjects average age was 5 years 3 months and the age range from 4 years to 6 years 4 months. All the children were from middle class families as judged from the father's occupation with many of them being professional men. Family size varied from 2-4 children and spacing range was 13 to 182 months. There were an equal number, i.e. 25 children of each sex. All children under four years were excluded. The mothers of the subjects were also used in the study.

It was decided to study "normal" children because jealousy is held to exist in every family and because in clinic cases there is likely to be other pathology, either in the child or in the family. In these cases the child is usually not referred for jealousy alone, and the jealous child referred to a clinic may differ from the jealous
child not referred. Pre-school children were chosen because they will have more interaction with siblings than older children and jealousy is more frequently found at this age. (see Shepherd et al 1971)

**Measuring Instruments.**

**Maryland Parental Attitude Survey.** (MPAS).

**Description.** The MPAS is a questionnaire designed by Donald Pumroy (1965). It has four scales, each measuring a parental attitude, i.e. disciplinarian (D) indulgent (I), protecting (P) and rejecting (R). It has a forced choice format and consists of 95 pairs of statements, eg. A. Parents should do things for their children (protective). B. A child's life should be as happy as possible (Indulgent) A. Watching television keeps children out of the way. (rejecting). B. Children should never be allowed to answer back to their parents (Disciplinarian).

The first 5 items are 'buffers' and are not scored. In the remaining 90 items, statements representing each attitude are paired with every other - an equal number of times. This means that there is a possible maximum score of 45 for each scale. The questionnaire is presented in full in Appendix A.

**Administration, scoring and norms.** The questionnaire carries instructions for the respondent, stating what the test measures and telling him/her that a choice must be made between A & B for every item. First reactions are designated the best response where decisions are difficult. Pumroy suggests that these written instructions be supplemented by prior discussion with the respondent to ensure full cooperation.

A scoring key is provided from which a scoring stencil can be made. T scores are given for male and female S's on all four scales. These are based on 188 subjects, 95 males and 93 females. The mean age of the males was 20.8 with a range of 16 to 37 years; the mean age for females was 18.5 with a range of 16 to 44 years. The T scores may not be appropriate for all studies as they have been mainly obtained from a college group who might differ in age and academic standing from other samples. However, this is
immaterial in the present study as the analysis of results has used methods involving ranking of scores and conversion from raw scores to T scores makes no difference to the outcome.

What the test measures. Pumroy (1965) provides descriptions of the type of parents represented by his scales and gives examples of their child-rearing behaviour. Thus an individual scoring high on any scale is assumed to show these characteristics. The descriptions are given below.

1. Indulgent parents. "These parents are child-centred; the child is allowed to have his own way in all matters. The child is showered with warmth and affection. If attempts are made at discipline the child knows he can circumvent them. He is not encouraged to show initiative and has no responsibilities. He is often given gifts and treats on impulse."

2. Disciplinarian parents. 'These parents need and expect fairly strict obedience from the child'. The child knows he will be punished if he does not comply because rules are explicitly stated. Punishment is fair and consistent. The parent pushes the child to grow up early and to achieve beyond his ability.

3. Protective parents 'are primarily concerned with seeing to it that the child takes a minimum amount of risks. These parents perform tasks for the child long beyond the time he is capable of doing the task for himself. They are overly watchful and alert to danger. The child is not allowed to grow in case something happens to him.

4. Rejecting and indifferent parents (combined category). These parents are openly and actively hostile towards their children. This is frequently reflected in punishment based on the parents feelings, not the child's behaviour, and engenders hostility in the child. Also included in this category are parents who have no strong feelings for the child. Their first interest is their own activities and they don't want to be bothered by their children.

Pumroy has developed these parental 'types' from the relevant literature but they are not entirely satisfactory as definitions of what the scales measure. These definitions are largely in terms of actual parental behaviour and in some cases in terms of the child's behaviour in the home.
situation, i.e. in terms of the presumed effects of holding these attitudes. However it is generally considered uncertain how far parental attitudes, measured in this way, are reflected in behaviour (e.g. Gildea, Glideman and Kantor 1960) and studies relating measures of parental attitudes to child behaviour have produced conflicting results. The scores produced by this questionnaire would appear to be measures of opinions, feelings or values and the relationship of these to behaviour is an assumption only. It seems necessary to regard the attitude held as a 'pre-disposition to perform certain kinds of responses' (Hunt and Winokur 1960) i.e. such as are mentioned in the above descriptions.

Development of the test. A pool of items was formed and given to nine psychologists to categorize, using the four descriptions of parent 'types' outlined above. Where six of the nine psychologists agreed on the categorization the item was retained. These items had previously been given to 178 subjects to answer as a 'good' parent should. To compile the questionnaire items judged equal in social desirability were taken from each category and combined to form the 90 forced choice pairs of the test.

Reliability. Test-retest reliability is between .62 and .73 for a sample of 30 male and 24 female college students with the retest after three months. Split-half reliability is between .66 and .84 for a sample of 45 male and 45 female college. Pumroy states that these reliability coefficients are similar to those of other instruments of this nature.

Validity. The test may be judged to have good face validity because of the way the items were selected. Test results are in the direction of theoretical expectations in the following cases. Males score higher on D and females on I, older subjects score higher on R and lower on D than younger subjects and parents who attended fewer parent discussion groups than others scored higher on R. Predictive validity is demonstrated by the agreement between test results and maternal behaviour. Mothers who had a high D score showed more directing and restricting behaviour than these with a low D score. 'Forbidding' behaviour was related to high R scores.

The evidence presented by Pumroy for the test's validity is rather limited and no other published data can be traced.
Possibly for an instrument of this nature face validity may be more important than in other cases.

**Forced-choice technique.**

When measuring attitudes, using a self-report inventory, faking and social desirability may have a large effect on the scores. This is especially so for reports of parental attitudes as there is now a large popular literature on child-rearing and parents are often sensitive to criticism in this area. Giving a 'popular' response is eliminated by making the subject choose between equally desirable alternatives, as in the MPAS. The forced choice format also eliminates other response sets, eg: a tendency to always agree or disagree with the given statements. Thus the test becomes more effective in discriminating individual differences in the attitudes being measured.

Anastasi (1968) does report that a specifically oriented group can still fake a forced choice test. Also the social desirability factor will only be equated for samples similar to the group used for the original judgments. Despite these facts, in general use the forced choice technique successfully eliminates most of the error due to response sets.

One disadvantage of the forced choice format is what Cronbach (1961) calls its "Have you stopped beating your wife?" character. The respondent may be put in the 'false' position of choosing between two totally inapplicable statements. This can evoke resistance and antagonism towards the test. The MPAS does not have a measure of response consistency, which could be introduced by repeating some of the pairs. It is possible that subjects may compensate, in cases of difficult decisions, by first choosing one attitude and later the other. However it is hoped that the instruction to register first reactions to the items will overcome these difficulties.

**Choice of the test.**

An attitude questionnaire has been used because this is an exploratory study. As Becker and Krug (1965) state one should use such an instrument as an "economical first approach in uncharted areas" before trying to get more
direct measures of parental behaviour. The MPAS was selected as a measure of parental attitudes in preference to other widely used tests, e.g. Parental Attitude Research Instrument (Schaefer and Bell 1958). The latter has been criticized for failing to control for response sets (Becker and Krug) whereas the forced choice format with items equated for social desirability makes the MPAS a better instrument for the present purpose.

2. Family Relations Test (FRT)

The test was developed to "indicate objectively, reliably and rapidly the direction and intensity of the child's feelings towards the various members of his family and ... his estimate of their reciprocal regard for him." (Anthony and Bone 1957). It provides a measure of positive and negative, incoming and outgoing attitudes towards all family members.

The test materials consist of 20 cardboard figures attached to boxes, and a set of "messages" printed on small cards. The figures are males and females of varying ages, two babies and a "Nobody". There are no facial features drawn so that the figures are ambiguous enough for the child to use them to represent his own family. The messages express positive and negative feelings coming from the child and going towards the child, and dependency feelings, e.g. "S thinks you are nice" or "S thinks you are naughty". There are eight items in each category (and a full list is given in Appendix B.)

There are two forms of the test, i.e. for older and younger children. In this case the latter was invariably used because of the age of the subjects.

Administration and scoring.

The 20 figures are arranged in the testing room at a convenient height for the child to see them. The child is asked to tell the examiner who are the people in his family and then to select from the figures those which best represent his family. He is then told that the examiner will read some messages which he can send to any member of his family by "posting" or placing them in the box behind the figure. Any message he does not wish to send to a family member may be given to "Mr Nobody". It is made clear that any message may be sent to as many people as the child desires. (There was one departure from the standard
procedure as several copies of each message were provided
to allow the child to give one to each family member if
he wished.)

At the end of the test the items given to each figure
are noted on the score sheet. Scores are obtained by
totalling the number of items in each category for each
figure, e.g. number of outgoing positive feelings to mother.
It is also possible to get overall positive and negative
scores and measures of total interaction with each figure.

Reliability. Anthony and Bene 1957 assessed split-half
reliability by correlating odd-even item subscores. They
obtained correlation coefficients between .68 and .98
from which they concluded that the test was "reasonably
reliable". Kauffman 1968 in an unpublished study found
test-retest reliability coefficients of 0.70 to 0.80 for
a sample of 41 children. There does not appear to be any
other published reliability data.

Validity. The test is difficult to validate as it purports
to measure the child's "psychic reality" rather than
"objective reality". Thus it is rather inconsistent to
compare results with independent behavioural criteria.
While allowing for this anomaly, Anthony and Bene (1957)
have compared test results with questionnaire and case
history material to try and establish the test's construct
validity. They feel that while there may not be perfect
agreement some correspondence should occur. There is also
some evidence of predictive and congruent validity from
more recent studies by other investigators.

Anthony and Bene found good correspondence between
assessments of parental attitudes and test results.
Where the father was described as hostile and punitive,
eight of ten children saw the father's feelings towards
them as predominantly negative. Test results significantly
differentiated between two groups where the mothers were
assessed as accepting or rejecting. There was also
significant agreement between the social workers assessment
of the sibling relationship and test results. Children
whose presenting complaint was sibling jealousy showed
significantly more negative responses to the sibling
defined in the complaint than to the neutral sibling.

Although these results, reported in the manual, provide
some evidence of the test's validity, they are not very satisfactory. The agreement with the criteria is not impressive in all cases, the statistical procedures have been criticized (Jensen 1959, Kauffman 1970) and the samples are small.

Kauffman (1970) quotes a study which provides some evidence of congruent validity. Van Slyke and Leton (1965) found significant inter correlations between FRT and Swanson child-parent relationship rating scale and Forer structured sentence-completion test. However Kauffman points out that the sample was small and there is no adequate validity data for the other two tests.

Two studies indicate that the FRT distinguishes between different clinical groups. Frost (1969) compares the results of 190 normal 6th grade children with a group of delinquent boys and a group of maladjusted non-readers. He found clear differences between the groups, eg. delinquents gave significantly less positive items to father, as well as finding certain trends in his normal population, eg. parents get more positive than negative items and siblings vice versa.

Kauffman (1971) compared groups of adjusted, school disturbed and institutionalised emotionally disturbed children. The FRT results showed significant differences between the groups, eg. the institutionalised children had a picture of strong positive feelings from their families and had a negative attitude towards themselves.

Both the above studies indicate that the FRT does show differences in perceived family relationships of children from different populations, and this may be taken as evidence of the test's predictive validity. The evidence on the test's reliability and validity is considered inadequate for a full evaluation (Jensen 1959; Kauffman 1970, 1971) but is not entirely unsatisfactory. Unfortunately all studies have used the older form of the test.

General evaluation. There is no information given about the selection of the test items so it is not sure whether they are representative of the child's attitudes to family members or whether they are classified correctly as positive and negative. (An example of a doubtful case is "S wants to spank you" which might be viewed as playful and affectionate but is classified as representing a negative attitude.)
The items may represent feelings of different strengths yet all receive the same weight. Anthony and Bene justify this by saying that for the pre-school child intensity of feeling is not differentiated, "like and love, dislike and hate overflow into each other." However from inspection of the items they seem to cover common situations and in general to be classified correctly.

Also neglected is the wording of the items and the child's understanding of the statements and the task as a whole. This is especially relevant for pre-school subjects. The task is a complex one, especially for children of this age. They must understand the statement, distinguish whether it is directed from or towards the self, consider it's applicability to all members of the family and hold all these possibilities in mind while a decision is made. In many cases the child does show his understanding by giving reasons for his choice, eg. a child who thinks his brother is bad will say that his brother hits him or takes his toys. Where words are unknown, eg. scold, a simple definition is necessary.

The test does provide numerical scores, thus facilitating statistical analysis, but multi-dimensional responses and the possibility of assigning one item to many figures, makes for a complex amount of data. At the same time this does mean that the test provides a great deal of well-defined and categorized information.

No norms have yet been established and use in clinical practice would require experienced interpretation (eg. for detecting the operation of defense mechanisms, as discussed in the manual.) When using the test in this way the validity of the interpretations is questionable. For the present study only scores for particular test categories are used and no interpretation is made of overall response patterns.

Children find the test situation non-threatening, novel and enjoyable. They show little reluctance to play what they regard as a game, they become involved in the task and their interest is sustained by being able to manipulate the materials. The family figures are designed to facilitate the child's reactions without eliciting fantasy. Bene
and Anthony feel that the provision of a "play" situation will allow a freer expression of attitudes, as emotion is commonly expressed through play at this age.

The main advantage of the test is its relative objectivity. There are a limited number of responses which can be made and a standard set of items and materials. However the test does retain flexibility through the individual choice of the family figures, the provision of "Nobody" and the possibility of make the same response to several figures. The test is quick and easy to administer and score, it provides a great deal of information about the pattern of relationships within the family, and this in a form which allows of formal analysis.

What is required for this study is a measure of the child's orientation towards parents and siblings in particular how the child feels towards his siblings and how he perceives his parents' attitudes towards him. This will supplement the measures of maternal attitudes and the child's behaviour in relation to his siblings provided by the mother.

The FRT is designed to measure variables at this level which is causally closest to the child's behaviour and personality (Hoffman and Lippitt 1960). Thus where a relationship is found between the two, the postulation of intervening steps is not required, ie. one may be fairly certain what influence is operating.

In their review of measures of family life variables, Hoffman and Lippitt (1960) discuss methods used in previous studies to tap this set of variables. There are two methods of measuring the child's attitudes and perceptions of family relations. These are projective tests such as the CAT or measures involving direct questioning of the child, eg. Family Relations Questionnaire (Brown, Morrison and Couch 1947). The latter method is unsuitable for the pre-school child because of the difficulty in verbal expression of attitudes and emotions at this age level. The projective tests take much time to administer and interpret and their reliability and validity is disputable. The fantasy output of the child (especially pre-school) varies tremendously on these tests (Meyer 1963) and often provides too little data for the required purpose.

Having weighed the drawbacks of the FRT in relation to the measures discussed above, the FRT was selected for
this study because it gave the required information and provided the most suitable way of working with 4 and 5 year old children. It is presented as a play situation, requires no verbal expression of attitudes and gives a fairly objective measure of the variables under consideration.

3. Sibling Relationship Questionnaire (SRQ)

The questionnaire was designed to give a measure of sibling rivalry. It consists of 24 items each describing an instance of behaviour and requiring the respondent to indicate frequency of occurrence on a five-point scale. The responses are scored from 0 to 4 and thus the maximum score is 96. See Appendix C.

The questionnaire was compiled from Cattell's (1953) Intra-Familial Attitudes Scales using the items from the Inter-Sibling Jealousy Scale. This comprises of a list of 24 "symptomatic acts" which he states are the items of behaviour which the experienced social worker looks for in judging the strength of this attitude. Although his scales are being used in research, details of validity, reliability and norms have not been published.

This instrument has been judged by the investigator as possessing adequate face validity. Retest reliability was established by asking 29 of the mothers to complete the questionnaire again after a two month interval. Using Spearman's rho the reliability coefficient was 0.67 (which is significant at better than the one per cent level of confidence). Although this figure is not very high it indicates a significant relationship between the two sets of scores. When the likelihood of some change in the child's behaviour over a two month period is taken into account (i.e. family relations are not static and the child is maturing) the measure can be regarded as reasonably reliable.

This questionnaire was adopted for the study after an examination of other sibling relationship measures, mainly by reference to Strauss (1969) who reviews all family measurement techniques that appear in published research reports up to that date. The first alternative is the use of projective techniques with the child, eg. doll play. Problems associated with such techniques have been outlined when discussing the Family Relations Test. For the present purpose, particular difficulties would be entailed in
obtaining comparable data from each child and in devising a reliable scoring system. The other method of obtaining information is through questionnaires given either to the parent or to the child. However, the available instruments contain very few items on sibling relations (seven at the most) and were not felt to provide an adequate measure of sibling rivalry. The present questionnaire covers many situations and behaviours and is felt to provide a representative sampling of items, thus producing a more reliable measure. Thus, despite lack of information on validity, reliability and norms this questionnaire was used as no other suitable measure existed.

Procedure.

The study was carried out while the investigator was on the staff of the nursery schools which meant that rapport had been established with many of the children and mothers prior to the investigation. Permission to carry out the study was granted by the principal and the full co-operation of the nursery school staff was ensured. The parents were given a note explaining that a study was being carried out from UCT with the co-operation of the schools. They were assured that all information gathered would be treated as confidential.

The MPAS, SRQ and background data sheet were distributed to the mothers by the investigator or the nursery school supervisors. It was pointed out that the MPAS might involve difficult choices but first reactions would be the best response. Both questionnaires carried written instructions. After a two month interval some of the mothers were asked to complete the SRQ a second time.

The FRT was administered during school hours. The child was asked to accompany the investigator to play a "game" with her. In nearly every case the children were eager to come and often wanted to play the "game" a second time. The testing took place in a separate room at the nursery school. Any children who were ill at ease were given time to adjust to the situation and engaged in neutral conversation. If a child was unwilling to participate testing was deferred. However, in all cases, once started, the testing was completed in one session.
The test materials were displayed at the child's eye level in the room and the test was administered as described in the discussion of the FRT. Note was taken of the child's remarks about any item and of behaviour during testing. The responses were recorded and scored after the child had left the room.

Statistics.

It was decided to use non-parametric statistical tests as the data from the SRQ does not fulfil the conditions associated with the use of parametric statistics, i.e. one cannot assume that it represents more than the ordinal scale of measurement and the scores are not normally distributed, i.e. fall towards the lower end of the scale. Non-parametric statistics entail fewer assumptions and therefore can be applied with more confidence to this data. The tests used have power-efficiency nearly matching the corresponding parametric test.

Correlations have been computed, (e.g. between MPAS scales and SRQ scores) using the Spearman rank correlation coefficient (r_s) which has 91% power-efficiency when compared with the corresponding parametric procedure. The Mann Whitney U Test has been used to test whether two independent groups have been drawn from the same sample, e.g. to test for sex differences in SRQ scores. This test has power-efficiency of 95% compared to the t test.

The Kruskal-Wallis one-way analysis of variance by ranks was used where there were several groups, e.g. to test for SRQ differences associated with family size. This is the most efficient non-parametric test for this purpose having power-efficiency of 95.5% compared to the F test. The chi square test was used to determine the significance of differences between two different groups where the data consisted of frequencies, e.g. to test for differences in attitudes towards same and opposite sex siblings. Where tied scores occur, the appropriate corrections have been applied.

It was decided to work at the .05 level of significance. The appropriate tables were consulted to determine the significance of the results.
The family composition data has been simplified, following the suggestion of Sutton-Smith and Rosenberg (1970), by combining categories, e.g., like vs opposite-sex siblings and S's with younger siblings vs those without.
RESULTS.

1. Sibling rivalry scores.

Table 1. Distribution of sibling rivalry scores.

<table>
<thead>
<tr>
<th>Scores</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>7</td>
</tr>
<tr>
<td>5 - 9</td>
<td>9</td>
</tr>
<tr>
<td>10 - 14</td>
<td>9</td>
</tr>
<tr>
<td>15 - 19</td>
<td>10</td>
</tr>
<tr>
<td>20 - 24</td>
<td>9</td>
</tr>
<tr>
<td>25 - 29</td>
<td>0</td>
</tr>
<tr>
<td>30 - 34</td>
<td>1</td>
</tr>
<tr>
<td>35+</td>
<td>3</td>
</tr>
</tbody>
</table>

Median = 13.9

Two of the 50 questionnaires were incomplete therefore the analysis is based on 48 cases. It is noted that the distribution of scores is positively skewed, i.e. not normally distributed, as the bulk of the scores fall at the lower end of the distribution. Therefore distribution-free or non-parametric statistics have been applied to this data.


The relationships between maternal attitude and sibling rivalry scores were determined by using the Spearman rank correlation coefficient.

Table 2. Correlations of maternal attitude and sibling rivalry scores.

<table>
<thead>
<tr>
<th>Score</th>
<th>Sibling rivalry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disciplinarian</td>
<td>-0.075</td>
</tr>
<tr>
<td>Indulgent</td>
<td>+0.076</td>
</tr>
<tr>
<td>Protective</td>
<td>-0.059</td>
</tr>
<tr>
<td>Rejecting</td>
<td>+0.165</td>
</tr>
</tbody>
</table>

None of the correlations were significant.

The Kruskal-Wallis one-way analysis of variance by ranks was used to test for differences in sibling rivalry scores associated with perceived parental attitudes.

Table 3.1. Sibling rivalry scores of seven groups experiencing different positive regard from father.

<table>
<thead>
<tr>
<th>Positive incoming feelings from father</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>16</td>
<td>6</td>
<td>24</td>
<td>24</td>
<td>19</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>9</td>
<td>1</td>
<td>10</td>
<td>8</td>
<td>24</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>15</td>
<td>4</td>
<td>13</td>
<td>24</td>
<td>17</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>20</td>
<td>24</td>
<td>6</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>8</td>
<td>35</td>
<td>16</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>19</td>
<td>13</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>0</td>
<td>16</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>12</td>
<td>19</td>
<td>7</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

\[ N = 48 \quad H = 3.5 \quad df = 6 \quad p < .05 \]

Thus there is no significant difference in sibling rivalry scores for groups experiencing different positive regard from father.
Table 3.2. Sibling rivalry scores of five groups experiencing different negative regard from father.

<table>
<thead>
<tr>
<th>Negative incoming feelings from father</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
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<td>24</td>
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<td>19</td>
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<tr>
<td>9</td>
<td>4</td>
<td>15</td>
<td>24</td>
<td>13</td>
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<tr>
<td>15</td>
<td>6</td>
<td>19</td>
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<td>10</td>
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<td>8</td>
<td>12</td>
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<td></td>
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<tr>
<td>24</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>33</td>
<td></td>
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</tbody>
</table>

N = 46  H = 3  df = 4  p ≤ .7

There is no significant difference in sibling rivalry scores of groups experiencing different negative regard from father.
Table 3.3. Sibling rivalry scores of eight groups of positive regard from mother.

<table>
<thead>
<tr>
<th>Positive incoming feelings from mother</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>35</td>
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<td></td>
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<td>13</td>
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<td></td>
</tr>
</tbody>
</table>

\[N = 48 \quad H = 6.5 \quad df = 7 \quad p \leq 0.5\]

There is no significant difference in sibling rivalry scores of groups experiencing different positive regard from mother.
Table 3,4. Sibling rivalry scores of four groups experiencing different negative regard from mother.

<table>
<thead>
<tr>
<th>Negative incoming feelings from mother</th>
<th>0</th>
<th>1</th>
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<tr>
<td></td>
<td>33</td>
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</tr>
</tbody>
</table>

N = 47  H = 0.05  df = 3  p = .99

Thus there are no significant differences in sibling rivalry scores associated with perceived paternal or maternal attitudes.

The Kruskal-Wallis one-way analysis of variance by ranks was used to test for differences in sibling rivalry scores associated with the child's attitudes to his parents, as measured by the Family Relations Test.

Table 4.1. Sibling rivalry scores of eight groups of positive regard towards mother.

<table>
<thead>
<tr>
<th>Positive regard towards mother</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>9</td>
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<td></td>
</tr>
</tbody>
</table>

\[ N = 48 \quad H = 6 \quad df = 7 \quad p \approx 0.7 \]

There is no significant difference in sibling rivalry scores for groups expressing different positive regard towards mother.
Table 4.2. Sibling rivalry scores of seven groups of positive regard towards father.

<table>
<thead>
<tr>
<th>Positive</th>
<th>outgoing feelings to father</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>1</td>
<td>6 2 5 13 50 17</td>
</tr>
<tr>
<td>13</td>
<td>16 10 24 16 13 24</td>
</tr>
<tr>
<td>20</td>
<td>4 9 6 19</td>
</tr>
<tr>
<td>8</td>
<td>4 15 9 11</td>
</tr>
<tr>
<td>24</td>
<td>8 37 0 33</td>
</tr>
<tr>
<td>19</td>
<td>11 0 12 24</td>
</tr>
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<td>20</td>
<td>19 15</td>
</tr>
<tr>
<td>16</td>
<td>35 2</td>
</tr>
<tr>
<td>9</td>
<td>17</td>
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</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>23</td>
</tr>
</tbody>
</table>

N = 48  H = 8  df = 6  p < .3

There is no significant difference in sibling rivalry scores of groups expressing different positive regard towards father.

Negative outgoing feelings to either parent were too infrequent to permit analysis.

Table 4.3. Distribution of negative outgoing feelings to (1) mother and (2) father.

<table>
<thead>
<tr>
<th>Score</th>
<th>f (1)</th>
<th>f (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>41</td>
<td>32</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>13</td>
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<tr>
<td>2</td>
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<td>2</td>
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<td>3</td>
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<td>2</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

N = 50
Thus no significant differences were found in sibling rivalry scores associated with the child’s attitude to either parent.

5. Family composition.
   a. Sex differences in sibling rivalry scores. The Mann-Whitney U Test was used to determine whether there were differences in sibling rivalry scores for males and female subjects.

   See Table 5.1.

   The result is not significant, therefore the null hypothesis of no difference in sibling rivalry scores of boys and girls was accepted.

   b. Ordinal position. The subjects were placed into three groups, i.e. oldest, middle or youngest child, and the Kruskal-Wallis one-way analysis of variance applied to the data.

   See Table 5.2.

   The null hypothesis was accepted, i.e. sibling rivalry scores are not significantly different for children in different ordinal positions.

   c. Displacement. The Mann-Whitney U Test was used to test the hypothesis that displaced children will be significantly more rivalrous than those not displaced. The subjects were placed into two groups, those with younger i.e. oldest and middle children, and those without younger siblings.

   See Table 5.3.

   Subjects with younger siblings, i.e. after displacement, have significantly higher rivalry scores than those without younger siblings.
Table 5.1. Sibling rivalry scores of male and female subjects.

<table>
<thead>
<tr>
<th>Boys</th>
<th>Rank</th>
<th>Girls</th>
<th>Rank</th>
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</thead>
<tbody>
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<td>24</td>
<td>41,5</td>
<td>24</td>
<td>41,5</td>
</tr>
<tr>
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<td>17</td>
<td>31,5</td>
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<td>6</td>
<td>8,5</td>
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<td>16,5</td>
<td>10</td>
<td>16,5</td>
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<tr>
<td>0</td>
<td>29</td>
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<td>1,5</td>
</tr>
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<td>36,5</td>
<td>20</td>
<td>36,5</td>
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<tr>
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<td>11,5</td>
<td>8</td>
<td>11,5</td>
</tr>
<tr>
<td>4</td>
<td>11,5</td>
<td>8</td>
<td>11,5</td>
</tr>
<tr>
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<td>41,5</td>
<td>24</td>
<td>41,5</td>
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<tr>
<td>11</td>
<td>18,5</td>
<td>24</td>
<td>18,5</td>
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<td>15</td>
<td>17</td>
<td>19</td>
<td>31,5</td>
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<tr>
<td>11</td>
<td>34</td>
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<td>41,5</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>0</td>
<td>35</td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td>9</td>
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<td>16,5</td>
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<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

\[ n_1 = 23 \quad R_1 = 511,5 \quad n_2 = 25 \quad R_2 = 656 \]

\[ U = 287,5 \quad z = 1,07 \quad p = 0,28 \]
Table 5.2. Sibling rivalry scores of oldest, middle and youngest children.

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<th></th>
<th>Oldest</th>
<th>Middle</th>
<th>Youngest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>Rank 31.5</td>
<td>Score 24</td>
<td>Score 6</td>
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<tr>
<td>17</td>
<td>16.5</td>
<td>5</td>
<td>16</td>
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<tr>
<td>10</td>
<td>48</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>50</td>
<td>41.5</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>24</td>
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<td>26.5</td>
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<td>16</td>
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<tr>
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<td>41.5</td>
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<td>14</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>24</td>
<td>41.5</td>
</tr>
</tbody>
</table>

\[ R_1 = 402 \] \[ R_2 = 291.5 \] \[ R_3 = 482.5 \]

\[ H = 4.91 \] \[ df = 2 \] \[ p < .10 \]
Table 5.3. Sibling rivalry scores of displaced and non-displaced subjects.

<table>
<thead>
<tr>
<th>Score</th>
<th>Displaced Rank</th>
<th>Score</th>
<th>Non-displaced Rank</th>
</tr>
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<tbody>
<tr>
<td>17</td>
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<td>6</td>
<td>8.5</td>
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<td>10</td>
<td>16.5</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>50</td>
<td>48</td>
<td>4</td>
<td>5.5</td>
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<tr>
<td>24</td>
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<td>6</td>
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<td>14</td>
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<td>26.5</td>
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<tr>
<td>19</td>
<td>34</td>
<td>1</td>
<td>3</td>
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<tr>
<td>15</td>
<td>26.5</td>
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<td>13</td>
<td>23</td>
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<tr>
<td>11</td>
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</tr>
<tr>
<td>0</td>
<td>1.5</td>
<td>24</td>
<td>41.5</td>
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<td>33</td>
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<td>2</td>
<td>4</td>
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<td>41.5</td>
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<td>14</td>
</tr>
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<td>20</td>
<td>36.5</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
<td>24</td>
<td>41.5</td>
</tr>
</tbody>
</table>

\[ n_1 = 24 \quad R_1 = 693.5 \quad n_2 = 24 \quad R_2 = 482.5 \]
\[ U = 182.5 \quad z = 2.18 \quad p = 0.0146 \]
d. Family size. The Kruskal-Wallis one-way analysis of variance was used to test for differences in rivalry scores for 2, 3 and 4 child families.

Table 5. Sibling rivalry scores for three groups of family size.

<table>
<thead>
<tr>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>24</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>24</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>11</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>19</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thus there is no significant differences in sibling rivalry scores for children from 2, 3 and 4 child families.

e & f. Spacing range and family density. The spacing range is defined as the difference in age between the youngest and oldest child in the family. Family density is defined as the ratio of spacing range to family size. The relationships between these variables and sibling rivalry were determined by using the Spearman rank correlation coefficient.
Table 5. Correlations of spacing range and family density with sibling rivalry scores.

<table>
<thead>
<tr>
<th></th>
<th>Correlation coefficient $r_s$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>Sibling rivalry</td>
</tr>
<tr>
<td>Family density</td>
<td>$-0.27$</td>
</tr>
<tr>
<td>Spacing range</td>
<td>$-0.28$</td>
</tr>
</tbody>
</table>

\[ P \leq 0.05 \] (two tailed) for both.

A one-tailed test could be used because the hypothesis about spacing had a specified direction, in which case the correlations are significant at the 5\% level. This would indicate that rivalry is greater where the family is dense and the siblings are closely spaced.

g. Family sex composition. Same and mixed sex families, (i.e. sibling groups of the same or different sex) were compared to see if there was a significant difference in rivalry scores.
Table 5.6. Sibling rivalry scores of same and mixed-sex sibling groups.

<table>
<thead>
<tr>
<th>Score</th>
<th>Rank</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>41,5</td>
<td>17</td>
<td>31,5</td>
</tr>
<tr>
<td>13</td>
<td>23</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>50</td>
<td>48</td>
<td>6</td>
<td>8,5</td>
</tr>
<tr>
<td>24</td>
<td>41,5</td>
<td>10</td>
<td>16,5</td>
</tr>
<tr>
<td>9</td>
<td>14</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>11</td>
<td>18,5</td>
<td>4</td>
<td>5,5</td>
</tr>
<tr>
<td>8</td>
<td>11,5</td>
<td>6</td>
<td>8,5</td>
</tr>
<tr>
<td>24</td>
<td>41,5</td>
<td>15</td>
<td>26,5</td>
</tr>
<tr>
<td>24</td>
<td>41,5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>18,5</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>19</td>
<td>34</td>
<td>13</td>
<td>47</td>
</tr>
<tr>
<td>13</td>
<td>23</td>
<td>37</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>14</td>
<td>4</td>
<td>5,5</td>
</tr>
<tr>
<td>16</td>
<td>29</td>
<td>19</td>
<td>34</td>
</tr>
</tbody>
</table>

\[
\begin{align*}
\text{Same-sex} &
\begin{array}{c}
\text{Score} \\
24 \\
13 \\
50 \\
24 \\
9 \\
11 \\
8 \\
24 \\
24 \\
11 \\
19 \\
13 \\
9 \\
16 \\
17 \\
19 \\
24 \\
9 \\
13 \\
35 \\
13 \\
10 \\
23 \\
0 \\
20 \\
33 \\
12 \\
24
\end{array} \\
\text{Rank} \\
41,5 \\
23 \\
48 \\
41,5 \\
14 \\
18,5 \\
11,5 \\
41,5 \\
41,5 \\
18,5 \\
34 \\
23 \\
14 \\
29 \\
5 \\
6 \\
10 \\
13 \\
16,5 \\
38 \\
1,5 \\
36,5 \\
45 \\
20 \\
34,5 \\
26,5 \\
41,5
\end{align*}
\]

\[
\begin{align*}
\text{Mixed-sex} &
\begin{array}{c}
\text{Score} \\
17 \\
5 \\
6 \\
10 \\
16 \\
4 \\
19 \\
13 \\
4 \\
34 \\
41,5 \\
14 \\
23 \\
46 \\
23 \\
16,5 \\
38 \\
1,5 \\
36,5 \\
45 \\
20 \\
41,5
\end{array} \\
\text{Rank} \\
31,5 \\
7 \\
8,5 \\
16,5 \\
29 \\
5,5 \\
26,5 \\
4 \\
5,5 \\
34 \\
1,5 \\
36,5 \\
26,5 \\
11,5 \\
4 \\
31,5 \\
10 \\
34 \\
41,5 \\
14 \\
23 \\
46 \\
23 \\
16,5 \\
38 \\
1,5 \\
36,5 \\
45 \\
20 \\
41,5
\end{align*}
\]

\[
\begin{align*}
& n_1 = 14 & R_1 = 399,5 & n_2 = 34 & R_2 = 776,5 \\
& U = 187,5 & z = 1,28 & p = .20
\end{align*}
\]
This result indicates that there is no significant difference in sibling rivalry scores for same or mixed-sex families.

6. Negative attitudes towards siblings, as measured by the Family Relations Test.

Table 6. Distribution of the range of negative outgoing feelings to siblings.

<table>
<thead>
<tr>
<th>Score</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>6'</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

Median = 2

N = 99

7. Negative attitudes towards siblings and sibling characteristics.

As the Family Relations Test provides a measure of the subjects negative feelings to each of his siblings, it is possible to test for differences in hostility associated with sibling characteristics.

a. Position of sibling. Position is defined simply in terms of being older or younger than the subject. The $X^2$ test was used to determine whether there is a significant difference in the amount of hostility felt towards older and younger siblings. One case was omitted because there was no information on the age of the siblings.
Table 7.1. Negative attitudes and position of sibling.

<table>
<thead>
<tr>
<th>Position of sibling</th>
<th>Older</th>
<th>Younger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative outgoing feelings to sibling.</td>
<td>6,7,8</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>3,4,5</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>0,1,2</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>35</td>
</tr>
</tbody>
</table>

\[ x^2 = 3.19 \quad df = 2 \]
\[ p \leq .01 \]

The result indicates that there is no significant difference in the amount of hostility felt towards older and younger siblings.

b. Sex of siblings. The \( x^2 \) test was used to determine whether the number of negative attitudes held towards siblings is related to the sex of the sibling.

Table 7.2. Negative attitudes and sex of sibling.

<table>
<thead>
<tr>
<th>Sex of sibling</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative outgoing feelings to sibling.</td>
<td>6,7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>4,5</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>2,3</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>0,1</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>44</td>
</tr>
</tbody>
</table>

\[ x^2 = 17.47 \quad df = 3 \]
\[ p \leq .001 \]

The result indicates that negative feelings towards siblings are related to the sex of the sibling with a significantly higher proportion of negative attitudes.
being directed towards male siblings.

c. Position and sex of sibling. Table 7,2 shows that significantly more negative feelings are directed towards brothers than sisters. The Mann-Whitney U Test was used to determine whether this difference exists regardless of the position of the sibling and the sex of the subject. The data has been analysed separately for male and female subjects with their older and younger siblings.

Table 7,3. Negative attitudes of female subjects towards their younger brothers and sisters.

<table>
<thead>
<tr>
<th>Score</th>
<th>Male Rank</th>
<th>Female Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>10,5</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>10,5</td>
<td>1</td>
<td>6,5</td>
</tr>
<tr>
<td>3</td>
<td>10,5</td>
<td>3</td>
<td>10,5</td>
</tr>
<tr>
<td>4</td>
<td>13,5</td>
<td>4</td>
<td>13,5</td>
</tr>
<tr>
<td>1</td>
<td>6,5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

\[ n_1 = 7 \quad R_1 = 69,5 \quad n_2 = 9 \quad R_2 = 66,5 \]
\[ U = 21,5 \quad p \geq 0.10 \]

This result indicates that there is no significant difference in negative attitudes of girls towards their younger brothers and sisters.
Table 7.4. Negative attitudes of female subjects towards their older brothers and sisters.

<table>
<thead>
<tr>
<th>Score</th>
<th>Male Rank</th>
<th>Score Rank</th>
<th>Female Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>24.5</td>
<td>1</td>
<td>14.5</td>
</tr>
<tr>
<td>1</td>
<td>14.5</td>
<td>1</td>
<td>14.5</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>35</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>27</td>
<td>1</td>
<td>14.5</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>29.5</td>
<td>3</td>
<td>24.5</td>
</tr>
<tr>
<td>2</td>
<td>20.5</td>
<td>7</td>
<td>33.5</td>
</tr>
<tr>
<td>4</td>
<td>27</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>29.5</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td>1</td>
<td>14.5</td>
</tr>
<tr>
<td>6</td>
<td>31.5</td>
<td>2</td>
<td>20.5</td>
</tr>
<tr>
<td>1</td>
<td>14.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>31.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ n_1 = 22 \quad R_1 = 457.5 \quad n_2 = 13 \quad R_2 = 172.5 \]
\[ U = 91.5 \quad z = 2.14 \quad p = .0324 \text{ (two-tailed)} \]

This result indicates that girls hold significantly more negative attitudes towards older brothers than towards older sisters.
Table 7.5. Negative attitudes of male subjects towards their younger brothers and sisters.

<table>
<thead>
<tr>
<th>Score</th>
<th>Male Rank</th>
<th>Female Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>17</td>
<td>3</td>
<td>13.5</td>
</tr>
<tr>
<td>2</td>
<td>10.5</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>18.5</td>
<td>7</td>
<td>18.5</td>
</tr>
<tr>
<td>3</td>
<td>13.5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>10.5</td>
<td>3</td>
<td>13.5</td>
</tr>
<tr>
<td>1</td>
<td>7.5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>7.5</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>13.5</td>
<td>1</td>
<td>7.5</td>
</tr>
<tr>
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<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ n_1 = 10 \quad R_1 = 117.5 \quad n_2 = 9 \quad R_2 = 72.5 \]

\[ U = 27.5 \quad p > .10 \]

This result indicates that there is no significant difference in negative attitudes of boys towards their younger brothers and sisters.
Table 7.6. Negative attitudes of male subjects towards their older brothers and sisters.

<table>
<thead>
<tr>
<th>Male Score</th>
<th>Male Rank</th>
<th>Female Score</th>
<th>Female Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>26.5</td>
<td>4</td>
<td>20.5</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>7</td>
<td>26.5</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>12.5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>12.5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>12.5</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>4</td>
<td>20.5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>12.5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This result indicates that boys hold significantly more negative attitudes towards older brothers than older sisters.

In sum, there is no relationship between negative attitudes and sex of sibling when the sibling is younger than the subject but there is a significant difference in negative attitudes towards older brothers and sisters with more negative attitudes felt towards older male siblings by both male and female subjects.

d. Spacing. A 2 x 3 contingency table was drawn up representing low, intermediate and high degrees of hostility (negative feelings) and spacing of less and more than four years between the subject and his sibling.
Table 7.7. Negative attitudes and spacing.

<table>
<thead>
<tr>
<th>Negative feelings towards sibling</th>
<th>13 - 48 mo</th>
<th>49 + mo</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,7,8</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>3,4,5</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>0,1,2</td>
<td>27</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>85</td>
</tr>
</tbody>
</table>

$X^2 = 6.61$  df = 2  $p \leq 0.05$

Those cases where the exact age of the siblings was not given were omitted from this analysis. The result indicates that negative attitudes are significantly related to spacing with a greater proportion of intermediate and high negative feelings where the age difference between subjects and sibling is four years or less.
The distribution of sibling rivalry scores (Table 1) suggests that in this sample there is little or no extreme jealousy. The highest score recorded is 50 while the maximum is 96. The finding of mainly low or moderate levels of jealousy is in accordance with that of Shepherd et al (1971) who found low and moderate levels of jealousy in over 90% of their sample of five year olds. As the present measure is not standardized it is impossible to say whether the highest scores obtained do represent extreme levels of jealousy or whether it is absent for this sample. The sample differs in one obvious respect from the Shepherd survey in that the children all came from middle-class homes rather than representing a cross-section of social class. If there are differences in the distribution of rivalry scores possibly this variable may account for it.

The distribution of the negative feelings of the subjects towards their siblings, (Table 6) is also positively skewed, indicating that most subjects feel little or moderate amounts of hostility for their siblings, as measured by the Family Relations Test. This data has been included in the analysis because it is felt to be relevant to sibling rivalry. In the introduction it was stated that jealousy is presumed to produce hostile and competitive attitudes which may or may not be manifested directly in behaviour and that sibling rivalry can be measured in terms of these attitudes. The Family Relations Test category of negative outgoing feelings to siblings, constitutes such a measure.

Bene and Anthony (1957) present data in the test manual on the outgoing negative feelings of fourteen children who had been referred for sibling jealousy. The form of the test for older children was used and the number of hostile items given to the sibling mentioned in the complaint (3.07 per sibling) is much greater than the number given to other siblings (1.49 per sibling). When the Mann-Whitney U Test is applied to their data it is found that significantly more negative outgoing feelings are given to the "rival" sibling than to other siblings. (U = 7.5  z = 4.8  p ≤ .001.)
Thus it is felt that the measure of negative outgoing feelings to siblings provides further information about sibling rivalry.

The results suggest that there is no significant relationship between sibling rivalry scores and maternal over-protection as measured on the MPAS (see Table 2). Thus the prediction of a significant positive relationship between these variables (hypothesis I) is not supported. This hypothesis was based on the assumption that jealousy arises out of frustrated dependency needs and that maternal over-protection produces dependency in the child. If these results hold generally then the lack of relationship indicates either that the origin of jealousy is not the desire for dependency rewards or that maternal over-protection is not related to dependency.

The present result is contrary to the early findings of Sewall (1930) and Levy (1937) that children of overprotective mothers are more likely to be jealous, but the studies are not directly comparable. The methods of assessment of maternal attitudes differ, i.e., a questionnaire and clinical judgement. In addition they focus on the immediate reaction to a new baby and it is quite possible that the immediate reaction to a disruption of a bond with an over-protective mother may be extremely traumatic. However the present study would suggest that the mother's attitude does not have a lasting effect on the sibling relationship.

The correlations of sibling rivalry scores with the other maternal attitudes measured on the MPAS were also not significant (see Table 2). Thus the present finding is that maternal rejection, indulgence and disciplinarian attitudes are not related to sibling rivalry. This suggests that the mother's child-rearing attitudes (presumably reflected in her practices) do not determine the degree of sibling jealousy in her child. However the MPAS gives a global assessment of attitudes, i.e., does not measure the mother's attitude and behaviour to any one child.
Lasko (1954) proposes that the mother's emotional relationship with particular children may differ although her child-rearing practices are constant for all. Possibly an assessment of the mother's relationship with each of her children, e.g. indicating preferences, etc. might yield interesting results. In addition it must be noted that this sample has not tapped extreme attitudes, e.g. deprivation or extreme over-protection. Possibly a relationship may exist between maternal attitudes and jealousy when extreme cases are considered.

No difference was found in sibling rivalry scores associated with perceived positive regard of parents as measured on the Family Relations Test, i.e. whether the child thought he was well or little-liked by either parent (see Table 3,1 and 3,3). This result fails to support hypothesis II, that the child will be most rivalrous when he perceives himself as receiving little positive regard from his parents. This hypothesis was based on assumption that the object of jealousy is parental regard or warmth and that where the child's needs are not met, i.e. if he sees himself receiving few positive feelings, jealousy of the rival sibling will be aroused. However the results suggest that sibling rivalry is not related to present receipt of parental warmth. This would indicate that the child's desire for dependency rewards is not the stimulus for present sibling rivalry although it does not discount it as being the original cause.

The present results (Tables 3, 2 and 3,4) also suggest that sibling rivalry is not related to perceived negative regard from parents, i.e. to what extent the child thought he was disliked by either parent. The relation of negative parental regard to sibling rivalry may be seen as a corollary of hypothesis II. Thus this finding provides some support for the previous result and conclusions.

The results presented in Tables 4,1 and 4,2 suggest that sibling rivalry is not related to the strength of the child's stated regard for his parents. It might be argued that if parental warmth etc is the main concern of the jealous child then the child's like or dislike of his parents would be related to the amount of jealousy arising. It is interesting to note that overall, very little hostility
is directed to either parent, particularly to the mother, (Table 4,3). One wonders whether this is a true reflection of the child's feelings or represents the operation of defenses which are not overcome by this measuring instrument. Such defenses might be operating because the expression of hostility towards parents arouses guilt feelings in the child. In that case the proposition that hostility is redirected elsewhere, eg. to siblings, receives support.

Hypothesis III that the displaced child will be more rivalrous than the child without younger siblings is supported by the results (Table 5,3). This suggests that the presence of younger siblings is related to the arousal of jealousy. The sibling relationship questionnaire does not measure direction so it is not clear whether the fact of displacement influences the direction of rivalry, ie. when displaced the child may become more rivalrous towards any or all of his siblings. The relationship between displacement and rivalry is seen as arising out of the disruption of the mother-child relationship and the introduction of another person with whom the parents' time and attention must be shared, and who requires particular care because of his early needs. This suggests that the origin of jealousy is the lessening or threatened loss of parental nurturance and warmth. It must also be remembered that a younger sibling produces particular annoyances for the older, apart from his claims on the parents. He damages property (Orbach 1966) and tells tales (Sutton-Smith and Rosenberg 1965), both being frustrating acts threatening the older child's status.

Sibling rivalry scores were not significantly different for the children in different ordinal positions (Table 5,3).
This suggests that first-born are no more rivalrous than middle or younger children.

The apparent contradiction in displacement and ordinal position effects is due to the fact that the displaced child may be either first or middle-born. It is when these categories (i.e., oldest and middle child) are combined that the sibling rivalry scores are significantly different from the scores of the last-born. The break-down into three ordinal groups was carried out to achieve greater clarity concerning these results. In fact middle-born children had the highest mean rivalry score, although not significantly so. This means that although displacement seems to increase rivalry there is no significant increase in jealousy for the most dependent child (i.e., the first-born who have been found to be more dependent than later born as discussed in the introduction, e.g., Warren 1966).

If this is generally true, it seems to indicate that displacement and the presence of younger siblings is stressful and tends to arouse jealousy despite the strength of the child's dependency needs. The oldest and middle child have to make an adaptation which is never necessary for the youngest who has an older sibling from the beginning.

The trend to higher rivalry for the middle child suggests that the combined frustrations arising from interaction with older and younger siblings and the disruption of the mother-child tie, may be more relevant to the development of jealousy than strength of dependency. Alternatively in this sample the strength of dependency may not differ greatly with ordinal position. It would be interesting to see whether ordinal position differences in sibling rivalry are found in a more representative sample.

No significant differences was found in the amount of hostility directed towards older and younger siblings, as measured by the Family Relations Test (Table 7, i). It was not possible to directly compare sibling rivalry scores with the child's negative attitudes towards siblings, but this result suggests that although the displaced child seems to
be more rivalrous, his jealousy is not necessarily directed towards his younger sibling. If it was, then there should be significantly more hostility expressed to younger rather than older children. However this point needs further clarification.

There is a trend towards greater rivalry when the family is dense and the children closely spaced (Table 5,5). The correlations are small, and significant only when a one-tailed test is used. Thus the hypothesis IV predicting less rivalry at the wider spacings receives tentative support. It is assumed that high density represents a situation where new siblings are introduced while the older child is still highly dependent on the mother, and that when closely spaced there is more contact, and opportunity for friction and competition over scarce resources.

The results also suggest that the child's hostility towards siblings (measured on the Family Relations Test) is greater when the sibling is four years or less, distant from the subject (Table 7,7). This lends some support to the trend outlined above. Thus, in this sample, significantly less hostility was shown to babies under a year old and to siblings approximately nine years and older, than to siblings nearer in age to the subject. This result is in general agreement with the findings of Bene and Anthony (1957) and Sears (1951) who found that little or no hostility was directed to the baby figure, and Helen Koch's (1956) finding that in most cases the child with a sibling 2 - 4 years distant shows the most jealousy.

It seems from the present results that there is no sex difference in sibling rivalry scores, i.e. boys and girls are equally jealous (Table 5,1). Several writers state that girls are more likely to feel jealous, e.g. Rogers (1969). Shepherd et al (1971) found that 5 year old girls show more extreme jealousy than boys (8% vs 6%) but there is no indication whether this result is statistically significant. There is no theoretical premise which would suggest greater jealousy for either sex, i.e. this result is congruent with theory.
The finding of no difference in rivalry scores for same or mixed-sex sibling groups (Table 5,6) suggests that rivalry is not related to the Oedipal situation. An explanation of jealousy in terms of the Oedipal situation would lead to an expectation of greater rivalry among same-sex siblings which is not supported by these results.

Table 7,2 shows that male siblings received significantly more negative feelings than female siblings, suggesting that children feel more jealous of brothers than of sisters. The further analysis of this data (Tables 7,3 7,4 7,5 7,5) suggests that if the sibling is younger, then sex does not affect the amount of hostility felt towards him or her but if the sibling is older it is the older brother who is most disliked. From this analysis it appears that the characteristics of the sibling may be an important factor in determining the direction and intensity of jealousy. If these findings are generally true, then one can speculate on their meaning. It seems likely that hostility is felt equally to younger brothers and sisters because they represent a threat to the child's relationship with the mother and present annoyances to the older child in terms of uncontrolled behaviour etc, regardless of their sex. When the sibling is older, he or she is probably no longer regarded as a competitor for the mother's nurturance and warmth. The subject, being younger, probably receives more of these than the older child. It appears that the sex of the sibling is the main correlate of hostility when the sibling is older than the child. This could be viewed in terms of the status and power of the sibling and his ability to cause frustration, i.e. the older brother is resented more than the older sister because he has more power and is more likely to frustrate the younger child.

One must be wary of generalising from these results because the validity of the measuring instruments might be questioned, it is not a fully representative sample, and the more extreme reactions have been eliminated. Therefore some of the hypotheses not supported by these results are not necessarily totally rejected in more universal terms.
It must also be noted that this study does not focus on the immediate reaction to the birth of a sibling but is concerned with later rivalry, which may be regarded as a more stable attitude.

If one assumes that the present results are more generally valid then one can speculate on their significance for an understanding of sibling rivalry. The idea that jealousy arises because of the disruption of the mother-child bond and the frustration of dependency needs, receives support from the finding that the displaced child is more more rivalrous and that spacing is related to hostility and rivalry. However, this formulation implies that there will be more rivalry with a younger sibling, which the present results do not support.

Present rivalry does not appear to be mediated by concern with parents because the child's feelings towards his parents and their attitudes towards him and about child-rearing are not related to sibling rivalry scores. It would seem that frustrations inherent in sibling interaction, ie. related to the characteristics of each child and their common needs, interests and activities, must be considered.

Erickson's (1968) idea of two types of rivalry, ie. of younger and older siblings, seems to fit these results. Rivalry of younger siblings seems to have its origin in frustration of dependency needs and the desire for the exclusive love and attention of the parents, ie. keeping rivals out. But even here, direct sibling interaction may contribute to the development of conflict. "Anticipatory rivalry" of older siblings appears to involve concern over power, status and achievement with the most powerful and frustrating agent evoking the most jealousy.

Referring back to the two models of sibling interaction discussed in the introduction, one may argue that the child's concern with his parents, especially competition for nurturance and warmth, is the original instigator of sibling rivalry, particularly for the displaced child. However, later rivalry appears to be sustained by direct interaction between siblings, which will be related to the characteristics of the children involved.
Conclusions.

1. Present rivalry is not related to the parent's attitude to the child, to the child's perceptions of parent's attitudes towards him, or to his attitude towards his parents.

2. The displaced child is more rivalrous than the child without younger siblings.

3. When the child has a sibling four years or less, distant from him, he feels more hostile towards him than if the age gap is wider.

4. Children feel more hostile towards brothers than towards sisters, particularly if the sibling is older than the child.

This is an exploratory study and although the results support certain of the hypotheses and can be assimilated into an explanatory framework, further research will be necessary to clarify any of the propositions herein.
APPENDIX A.

Below are presented 95 pairs of statements on attitudes toward child rearing. Your task is to choose ONE of the pair (A or B) that MOST represents your attitude, and place a circle around the letter (A or B) that proceeds that statement.

Thus: (A) Parents should like their children.

B. Parents frequently find children a burden.

Note that in some cases it will seem that both represent the way you feel; while, on other occasions, neither represents your point of view. In both cases, however, you are to choose the one that MOST represents your point of view. As this is sometimes difficult to do, the best way to proceed is to put down your first reaction. Please pick one from each of the pairs.

1. (A) Parents know what is good for their children.
   B. A good leather strap makes children respect parents.

2. (A) Parents should give some explanations why children should do some things and not do others.
   B. Children should never be allowed to break a rule without being punished.

3. A. Parents do much for their children with no thanks in return.
   B. Children should have jobs that they do without being reminded.

4. (A) Parents should sacrifice everything for their children.
   B. Children should obey their parents.

5. (A) Children should follow the rules their parents put down.
   B. Children should not interfere with their parents' night out.

6. (A) Parents should watch their children all the time to keep them from getting hurt.
   B. Children who always obey grow up to be the best adults.

7. (A) Children should never be allowed to answer back to their parents.
   B. Parents should go with their children to the places they want to go.

8. (A) Children should learn to keep their place.
   B. Children should be required to consult their parents before making any important decisions.

9. (A) Quiet, well-behaved children will develop into the best type of grown-ups.
   B. Parents should pick up their child's toys if he doesn't want to do it himself.

10. (A) Parents should do things for their children.
    B. A child's life should be as pleasant as possible.

11. (A) Watching television keeps children out of the way.
    B. Children should never be allowed to answer back to their parents.

12. (A) Personal untidiness is a revolt against authority so parents should take the matter in hand.
    B. A good child always asks permission before he does anything so he doesn't get into trouble.

13. (A) Sometimes children make a parent so furious that they lose their temper.
    B. Parents should do things for their children.
14. A. Children should be taught to follow the rules of the game.
   B. A child's life should be as pleasant as possible.

15. A. Parents should give their children whatever the children want.
   B. Many parents wonder if it is worth being a parent.

16. A. A child's life should be as pleasant as possible.
   B. Sometimes children make their parents so furious that they lose their temper.

17. A. Children should not tell anyone their problems except their parents.
   B. Children should play wherever they feel like in the house.

18. A. A good form of discipline is to make a child do without the things he really wants.
   B. Children should do what they are told without arguing.

19. A. Children should be taken to and from school to make sure there are no accidents.
   B. Children who always obey grow up to be the best adults.

20. A. Many parents wonder if it is worth being a parent.
    B. Children should be required to consult their parents before making any decisions.

21. A. If a child doesn't like a particular food, he should be made to eat it.
    B. Children should have lots of gifts and toys.

22. A. Children should play wherever they feel like in the house.
    B. Good children are generally those who keep out of their parents' way.

23. A. Children never volunteer to do anything around the house.
    B. Parents should pick up their child's toys if he doesn't want to do it himself.

24. A. Good children are generally those who keep out of their parents' way.
    B. Children should not be allowed to play in the living room.

25. A. Modern children answer back to their parents too much.
    B. Children should be required to consult their parents before making any decisions.

26. A. Parents should make it their business to know everything their children are thinking.
    B. Children never volunteer to do any work around the house.

27. A. Children should come immediately when their parents call.
    B. Parents should give surprise treats for their children.

28. A. Good parents overlook their children's shortcomings.
    B. Watching television keeps children out of the way.

29. A. Parents should watch their children all the time to keep them from getting hurt.
    B. A child should never be forced to do anything he doesn't want to do.

30. A. Television keeps children out of the way.
    B. The most important thing to teach children is discipline.

31. A. Children should do what they are told without arguing.
    B. Parents know how much a child needs to eat to stay healthy.

32. A. Television keeps children out of the way.
    B. A child needs someone to make decisions for him.
33. (A) Modern children answer back to their parents too much.  
(B) Parents should play with their children if there are no children about to play with them.

34. (A) Good children are generally those who keep out of their parents' way.  
(B) Parents should pick up their child's toys if he doesn't want to do it himself.

35. (A) Parents should see to it that their children do not learn bad habits from others.  
(B) Good parents show their children whenever they can that they love them.

36. (A) Parents shouldn't let their children tie them down.  
(B) Modern children answer back to their parents too much.

37. (A) Children who destroy any property should be severely punished.  
(B) Children cannot make judgments very well for themselves.

38. (A) Most parents are relieved when their children finally go to sleep.  
(B) Parents should hide dangerous objects from their children.

39. (A) Children should not be allowed to play in the living room.  
(B) Children should play wherever they feel like in the house.

40. (A) Parents should give surprise treats for their children.  
(B) Most parents are relieved when their children finally go to sleep.

41. (A) Children should be taken to and from school to make sure there are no accidents.  
(B) Parents should clean up after their children.

42. (A) Children are best when they are asleep.  
(B) Personal untidiness is a revolt against authority so parents should take the matter in hand.

43. (A) The earlier the child is toilet trained the better.  
(B) A child needs someone to make judgments for him.

44. (A) Watching television keeps children out of the way.  
(B) Parents should accompany their children to the places they go.

45. (A) The earlier the child is toilet trained the better.  
(B) Good parents overlook their children's shortcomings.

46. (A) Parents should clean up after their children.  
(B) Children need their natural meanness taken out of them.

47. (A) Parents should give surprise treats for their children.  
(B) Parents should hide dangerous objects from their children.

48. (A) Most parents are relieved when their children finally go to sleep.  
(B) Children should come immediately when their parents call.

49. (A) Children who lie should always be spanked.  
(B) Children should be required to consult their parents before making any decisions.

50. (A) Sometimes children just seem nasty.  
(B) Parents should see to it that their children do not learn bad habits from others.

51. (A) Punishment should be fair and fit the crime.  
(B) Parents should feel great love for their children.

52. (A) Parents should buy the best things for their children.  
(B) Children are best when they are asleep.
53. A. Children should be required to consult their parents before making any decisions.
B. Parents should give their children whatever the children want.

54. A. Parents should have time for outside activities.
B. Punishment should be fair and fit the crime.

55. A. Children should not be allowed to play in the living room.
B. Children should not tell anyone their problems except their parents.

56. A. It seems that children get great pleasure out of disobeying their elders.
B. Parents should watch their children all the time to keep them from getting hurt.

57. A. Personal untidiness is a revolt against authority so parents should take the matter in hand.
B. Parents should buy the best things for their children.

58. A. Children should learn to keep their place.
B. Good parents overlook their children's shortcomings.

59. A. Parents should accompany their children to the places that they want to go.
B. Good parents overlook their children's shortcomings.

60. A. Children do many things just to torment their parents.
B. Parents should insist that everyone of their commands be obeyed.

61. A. Children should come immediately when their parents call.
B. Parents should hide dangerous objects from their children.

62. A. Children do many things just to torment a parent.
B. Children should be protected from upsetting experiences.

63. A. Children who lie should always be spanked.
B. Parents should give their children whatever the children want.

64. A. A child should never be forced to do anything he does not want to do.
B. It seems that children get great pleasure out of disobeying their elders.

65. A. Parents should keep a night light on for their children.
B. Parents live again in their children.

66. A. Sometimes children make parents so furious that they lose their temper.
B. Children should be taught to follow the rules of the game.

67. A. Parents should insist that every one of their commands be obeyed.
B. Children should be protected from upsetting experiences.

68. A. Good children are generally those who keep out of their parents' way.
B. Children should not tell anyone their problems except their parents.

69. A. Children who destroy property should be severely punished.
B. Children's meals should always be ready for them when they come home from play or school.

70. A. Parents should frequently surprise their children with gifts.
B. A good form of discipline is to make children do without the things that they really want.
71. A. Children should depend on their parents.
   B. Parents should play with their children if there are no children
      about for them to play with.

72. A. Many parents wonder if it is worth being a parent.
   B. Children who lie should always be spanked.

73. A. Quiet, well behaved children will develop into the best type of
      grown-up.
   B. Children never volunteer to do anything around the house.

74. A. Children need their natural nastiness taken out of them.
   B. Children should be taken to and from school to be sure that there
      are no accidents.

75. A. Children should never be allowed to answer back to their parents.
   B. Good parents overlook their children's shortcomings.

76. A. Parents should give their children all that they can afford.
   B. Television keeps children out of the way.

77. A. Children cannot make judgements very well for themselves.
   B. Children's meals should always be ready for them when they come
      home from play or school.

78. A. Sometimes children are inconvenient.
   B. Children should be reprimanded for breaking things.

79. A. If children misbehave they should be punished.
   B. Parents should see if it that their children do not learn bad
      habits from others.

80. A. Children are often in one's way around the house.
   B. Children seven years old are too young to spend holidays away from
      the family.

81. A. Children should do what they are told without arguing.
   B. Parents should frequently surprise their children with gifts.

82. A. Parents should feel great love for their children.
   B. Parents should have time for outside activities.

83. A. A child needs someone to make judgements for him.
   B. Good parents overlook their children's shortcomings.

84. A. Parents should make it their business to know everything their
      children are doing.
   B. Quiet, well behaved children will develop into the best type of
      grown-up.

85. A. Children who destroy any property should be severely punished.
   B. A good child always asks permission before he does anything so
      that he does not get into trouble.

86. A. A good form of discipline is to deprive a child of things that he
      really wants.
   B. Parents know how much a child needs to eat to stay healthy.

87. A. The most important thing to teach a child is discipline.
   B. Parents should give their children all that they can afford.

88. A. Parents should amuse their children if no playmates are around to
      amuse them.
   B. Parents shouldn't let children tie them down.

89. A. Parents know how much a child needs to eat to stay healthy.
   B. Parents should frequently surprise their children with gifts.

90. A. Sometimes children just seem nasty.
   B. If children misbehave they should be punished.
91. A. Children should be taught to follow the rules of the game.  
B. Parents should do things for their children.

92. A. Parents shouldn't let their children tie them down.  
B. Children should depend on their parents.

93. A. Children who always obey grow up to be the best adults.  
B. Parents should clean up after their children.

94. A. Children's meals should always be ready for them when they come home from play or school.  
B. Children do many things just to torment a parent.

95. A. A good child always asks permission before he does anything, so that he doesn't get into trouble.  
B. Parents should buy the best things for their children.
APPENDIX B.

FAMILY RELATIONS TEST.

THE TEST ITEMS.

Form for Young Children.

(... stands for the name by which the child is usually called.)

Positive Feelings Coming from Child.

N...thinks you are nice. Who is nice?
N...loves you. Whom does N... love?
N...likes to play in your bed. In whose bed does N... like to play?
N...like to give you a kiss. Whom does N...like to kiss?
N...likes to sit on your lap. On whose lap does N... like to sit?
N...likes to be your little boy (girl). Whose little boy (girl) is N...
N...likes to play with you. Whom does N...like to play with?
N...likes to go for walks with you. Who should take N... for walks?

Negative Feelings Coming from Child.

N...thinks you are naughty. Who is naughty?
N...doesn't like you. Who is it that N...doesn't like?
N...thinks you are bad. Who is bad?
N...would like to spank you. Whom would N...like to spank?
N...wants you to go away. Whom would N...send away?
N...hates you. Who is it that N...hates?
N...thinks you are nasty. Who is nasty?
You make N...cross. Who makes N... cross?

Positive Feelings Going Towards Child.

You like to play with N... Who likes to play with N...?
You like to kiss N... Who likes to kiss N...?
You smile at N... Who smiles at N...?
You make N... feel happy. Who makes N... feel happy?
You like to hug N... Who likes to give N... a hug?
You love N... Who loves N...?
You are nice to N... Who is nice to N...?
You think N... is a nice little boy (girl). Who thinks that N... is a nice little boy (girl)?
Negative Feelings going Towards the Child.

You smack N... Who smacks N...?
You make N... sad. Who makes N... sad?
You scold N... Who scolds N...?
You make N... cry. Who makes N... cry?
You get cross with N... Who gets cross with N...?
You say N... is naughty. Who says N... is naughty?
You say N... is a bad boy (girl). Who says N... is a bad boy (girls)?
You don't like N... Who doesn't like N...?

Dependence.

N... wants you to tuck him (her) into bed at night. Who should tuck N... in at night?
N... wants you to give him (her) his (her) dinner. Who should give N... his (her) dinner?
N... wants you to help him (her) with his (her) bath. Who should help N... with his (her) bath?
N... likes to come to you when he (she) has hurt himself (herself). Who is it N... wants when he (she) has hurt himself (herself)?
N... wants you to mend his (her) toys when they are broken. Who should mend N...'s toys when they are broken?
N... wants you to help him (her) get dressed in the morning. Who should help N... get dressed in the morning?
N... like you to be with him (her) when he (she) is not feeling well. Who is it N... wants when he (she) is not well?
N... wants you to come when he (she) is frightened. Who is it N... wants to come when he (she) is frightened?
**APPENDIX C.**

**SIBLING RELATIONSHIP QUESTIONNAIRE.**

**CHILD'S NAME:**

**DIRECTIONS:** Below are statements which concern your child's relationship with his/her siblings, i.e. brothers and sisters. The statements refer to situations which occur in most families. When answering please keep in mind your nursery school child, whose name is written above. Consider each item and indicate how often it occurs by ringing the appropriate symbol i.e. very frequently (VF), frequently (F), occasionally (O), very occasionally (VO), never (N). If you have more than two children please state in the last column which of the child's brothers and sisters are involved, in each situation.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency of occurrence</th>
<th>Sibling involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child engages in an activity in which he can do better than his sibling.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>2. Child seeks an opportunity to tell tales about a sibling.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>3. Child becomes attention seeking in the presence of a sibling.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>4. Child tries to get more of parent than sibling gets eg. arranges to sit next to parent in the car.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>5. When a sibling is praised the child makes objections.</td>
<td>VF O F O VO</td>
<td></td>
</tr>
<tr>
<td>6. Child seeks evidence which can be used against a sibling so that he will not escape punishment.</td>
<td>VF O F O VO</td>
<td></td>
</tr>
<tr>
<td>7. Child is very sensitive to the possibility of his sibling getting advantages and looks out for them.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>8. Child says he has been unfairly treated in relation to his sibling eg. &quot;John gets all the cream.&quot;</td>
<td>VF F O VO N</td>
<td></td>
</tr>
<tr>
<td>9. When he is with his sibling child seems frustrated, resentful, glue or quiet.</td>
<td>VF F O VO N</td>
<td></td>
</tr>
</tbody>
</table>
Sibling Relationship Questionnaire. 2.

10. Child cannot tolerate his sibling's attention-getting behaviour and is provoked to similar behaviour or anger.
11. Child avoids family and/or home, saying it is because of favouritism shown towards sibling.
12. Child, when punished by parents, "takes it out" on sibling.
13. Child reacts angrily to a comparison with sibling, or to attempts to get him to copy sibling.
14. Child gets angry when attention is shown to sibling by a guest or by a parent.
15. In a dispute between parents and sibling, child sides with parents.
16. Child seeks parent's attention when he has no real need to do so, in order to keep his sibling from the parent.
17. Child is specially good when sibling is nearby.
18. Child destroys the paintings, etc., of sibling.
19. If child discovers anything nice he keeps it to himself.
20. Child seeks companions outside the family and tries to keep his sibling from sharing these friends.
21. Child attacks his sibling when his parents are not about and reports that he was attacked first.
22. Child feigns illness when his sibling is getting special attention.
23. Child makes some trivial thing the basis for a serious quarrel with his sibling.
24. Child invents or uses an objectionable nickname for his sibling.
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