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AN INVESTIGATION OF THE EFFECTS OF FATHER ABSENCE ON CHILDREN AGED BETWEEN FIVE AND ELEVEN YEARS

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I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other University of Institution.

Monica Hayes.....

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ABSTRACT

The effects of permanent and intermittent father absence on the cognitive development and the emotional and behavioural problems of children aged between 5 and 11 years were examined. There were two investigations. In the first of these 53 children aged between 5 and 7 years were studied. In the second investigation there were two samples, one of 52 children aged between 5 and 7 years and the other of 54 children aged between 8 and 11 years. The samples were drawn randomly from the population of a city. Middle class and working class male and female children were included. All children had either one or two siblings. Those whose fathers were permanently away because of parental divorce and those whose fathers were away intermittently because of occupational demands were compared with children whose fathers were never away from home.

The results of the investigations indicated that absence of the father, whether permanent or intermittent, had no effect on the cognitive development of the children assessed by the WISC. Both teachers' and mothers' reports showed that permanent absence of the father was associated with an increased incidence of emotional and behavioural problems in children aged between 5 and 7 years and children aged between 8 and 11 years. Middle class boys and working class girls were found to be particularly affected. Intermittent absence of the father was found to be related to a higher incidence of problems only in mothers' reports of children aged between 5 and

7 years and the effect was not as clear as that observed in the permanent absence group.

The explanation that father absence itself, or a consistent pattern of environmental circumstances associated with that absence, caused the increased incidence of emotional and behavioural problems in the children was rejected. An alternative was proposed in which absence of the father and the circumstances accompanying such absence were considered as specific events among many that might, but would not necessarily increase the environmental stress experienced by the children. Only when the cumulative stress experienced by an individual child reached a level, which for him or her was critical, would emotional and behavioural problems appear.

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CHAPTER ONE

PARENTAL ABSENCE: A REVIEW OF RESEARCH

The relationship between the child and the mother and the role of the mother in the process of child-rearing have been extensively investigated by those concerned with the study of child development. The father-child relationship has, in comparison, received scant attention. The father has been relegated by many to the role of material provider. His importance to the child is seen as indirect insofar as he provides support for his wife in her role as mother.

Until recently few studies existed that provided information on the role of the father in the family. Those that were carried out, however, contradicted the assumption that fathers were only indirectly relevant to their children. Tasch (1952) interviewed 85 fathers who, between them had 160 children. She reported that these fathers saw themselves as important and active participants in the upbringing of their children. Companionship was the function that they felt was most important that the father should fulfill and the function of economic provider was considered secondary.

Pederson and Robson (1969) questioned mothers of infants aged between 8 months and 9½ months about the behaviour of their husbands towards the children. They found that the majority of fathers were highly involved. Also they reported that the nature of the father-child relationship was correlated with some behaviours

in the infants. For example, the exercise by the father of authoritarian control was correlated with sleep disturbance in infant girls.

Newson and Newson (1968, 1976) in their studies of 700 children at ages 4 and 7 years report that in 70% of cases fathers are reported to be highly or moderately participant in child rearing.

Further studies by Radin (1972, 1973) and by Jordan, Radin and Epstein (1975) investigated the relationship between father-child interaction and the intellectual functioning of boys aged 4 years They found, by means of interviewing the fathers, testing the boys and observing the interaction between father and son, that the Intelligence Quotient (IQ) of the boys was positively correlated with paternal nurturance and negatively correlated with paternal restrictiveness.

If we examine the literature on parental absence, a similar pattern emerges. It is the absence of the mother that has been seen as most worthy of study, comparatively little attention being focussed on the absence of the father. This, in spite of the fact that in most families experiencing the temporary or permanent absence of a parent it is the father who is missing (Finer, 1974). Also, in many of the studies purporting to investigate maternal absence, the child is absent from both parents.

Maternal Absence

There are a number of comprehensive reviews and evaluations of the research into maternal absence (Ainsworth, 1962; Rutter, 1972;

Yarrow, 1961) and it is not the intention to attempt such a task here. Rather, it is intended to chart the course that the research has followed.

Many studies label absence of the mother as deprivation, a label which immediately implies a negative outcome. Early studies purporting to be concerned with maternal deprivation investigated children who, for various reasons were being reared in institutions. Spitz (1945) conducted one of the first large scale studies of a group of children less than a year old who were living in two types of institutional environment. The first group, the infants of delinquent girls detained in prison, were cared for in the prison nursery, either by their mothers or by permanent mother substitutes. There were toys to play with and the children were given the opportunity to observe what was going on around them. The second group were infants being reared in a foundling home because their mother, for some reason, could not support them. In this institution a nurse had the care of eight children and the only nurse-child interaction occurred at feeding time. Few, if any toys were provided and vision was obstructed because sheets were hung over the cots.

Spitz found differences in the development quotient of the two groups, that of the foundling group being lower. Also, two thirds of this group had retarded skeletal movements. He also investigated what happened to nursery children who were separated from their mothers. It was found that they developed a number of disturbing symptoms. They were sad, weepy and behaved as though in a daze.

Spitz attributed all these results to deprivation of the mother or mother figure. This interpretation was criticised on a number of grounds. Firstly because no note was made of the number of children in the study who suffered from congenital abnormalities, secondly, because no information was given about differences between the mothers in the two groups, thirdly the validity of the tests used was questioned and finally, whilst the study was progressing some children from the foundling home, possibly those least disturbed, were adopted and their results were not included.

Another early study by Goldfarb (1945) compared two groups of children separated from their mothers at the age of 9 months, one group leaving the institution at a year old and the other remaining until they were 3 years old before being fostered. The second group was found by Goldfarb to have lower intellectual development, were more unmanageable and had a lower level of language development than the group fostered after spending a shorter time in the institution.

Goldfarb, like Spitz, attributed these results to longer loss of mothering in the second group. However Goldfarb did not take into account the possibility of initial differences between the two groups which may have accounted for the earlier fostering of the first group.

It was the result of research such as this, together with information gained from his own studies, that led to the publication in 1951 of John Bowlby's paper on maternal deprivation. Bowlby (1946) had earlier compared life history data of 44 juvenile delinquents with a control group of non-delinquents. He found that half of his experimental group had suffered at least six months complete separation

from their mothers during the first five years of their lives. Only two of the control group had had a similar experience.

In the paper published in 1951 reviewing findings such as those outlined above, Bowlby asserted that 'prolonged deprivation of maternal care may have grave and far reaching results'. He suggested that 'maternal deprivation' had both long and short term consequences. He outlined three stages in the child's immediate response to deprivation, protest, despair and lastly detachment. Bowlby suggested that these symptoms have an indication of long term effects which he considered to be the danger of the development of an affectionless personality, unable to form attachments.

An important mediating factor was thought to be the age at which the deprivation occurred. Bowlby himself considered that deprivation after the child had reached the age of 5 years was not so significant. Schaffer (1958) also suggested that a critical lower age limit existed. His experiments attempted to establish at what age infants began to be disturbed by separation from their mothers. He found that the average age at which disturbance on separation was manifested to be 7 months. He therefore concluded that the infant could only experience absence of care and not absence of a particular person, the mother, before this age. He suggested that other deprivations of, for example, care or perceptual stimulation could affect the infant, but specific maternal deprivation was not relevant before the child could recognise the mother as distinct from other caretakers.

The work of Bowlby and others in the same area had a tremendous impact, not only on psychology, but also on social work and child care.

Conditions in hospitals were modified, especially for younger children. Mothers began to be allowed to visit them for longer periods or in some cases to stay with them all the time. Child care in institutions was reorganised. There were moves to divide large children's homes into smaller family units. However, an over zealous interpretation of what were intended to be hypotheses and theories, led to problems. Some of those people concerned with child welfare interpreted the findings to mean that mothers should never leave their young children, or, that however bad the home was, leaving the child there was preferable to separation from the mother.

Whilst Bowlby and his associates appeared to be satisfied that the research findings could be attributed to deprivation of maternal care, other researchers questioned the interpretation of the findings. The criticisms made were both methodological and theoretical.

Methodological problems, it was suggested, arose firstly because of the lack of precision in the definition of the phenomena to be investigated, secondly because of the disregard, in some cases, of important additional variables and thirdly because of the research strategies employed.

The lack of precision in definition arose partly because the label 'maternal deprivation' was applied to a number of different conditions and partly because the terms 'deprivation' and 'separation' were sometimes used interchangeably. At least four interpretations of the term maternal deprivation have been used:

a) separation from the mother and institutionalisation

b) separation plus other alternative care

c) no separation, but an inadequate mother-child relationship

d) multiple mothering.

Ainsworth (1962) pointed out the necessity of distinguishing between insufficiency, distortion and discontinuity of care.

Yarrow (1961) has suggested that a child's environment should be considered as having four different, significant aspects. These are physical, emotional, social and learning aspects. Thus to attempt to investigate a global concept, maternal deprivation, without considering its implications for each of the four aspects would only lead to confusion.

The second methodological difficulty arises when attempts are made to identify causal relationships without attempting to control for, or take into account variables that may be crucial in the interpretation of findings. Such variables include the nature and duration of the separation/deprivation experience, the quality of mothering before and after the experience, the age and stage of development of the child, his physical health and what happens after the separation (Rutter, 1972). With such a complex situation the problems of control are immense.

Finally methodological difficulties arise as a result of problems inherent in the research strategies employed. Because of the problems of control of variables in the non-laboratory strategies and the question of the applicability of results of research carried out in the more limiting setting of the experimental laboratory, it is possible

to question the interpretation of results put forward by Bowlby and his colleagues. This is particularly true of hypothesised long-term effects.

1. Long-term effects

Some investigators have attributed findings of long-term effects to factors other than the disruption of the mother-child relationship. Possible long-term effects may be considered under three headings. These are, firstly cognitive deficits, secondly emotional and personality deficits and thirdly delinquency.

a) Cognitive deficits

One alternative explanation of the finding that children reared in institutions are sometimes found to have cognitive deficits when compared to children who have been reared within a family, suggests that the former group experience stimulus deprivation (Hebb, 1949; Yarrow, 1961). Such stimuli include perceptual, social and linguistic stimuli. Those investigators reason that, as many of the studies investigating maternal deprivation examined children reared in institutions, the cognitive deficits were a result of impoverishment of the environment rather than the absence of the mother. They suggest that, as early learning affects later development, when this is restricted then a deficit may result. In support of this point there is some evidence that the performance of institutionalised children improves if their learning experiences are increased (Kirk, 1958).

b) Emotional deficits

Some studies in which the investigators interpret the results as indicating that a child deprived of its mother experiences emotional deficits have also been interpreted in a different way. An alternative hypothesis is that the difficulties that children deprived of their mothers experience in emotional relationships are due to the isolation of the children from adequate social contacts. It is lack of social stimulation, rather than deprivation of the mother per se, which gives rise to the problems (Harlow & Harlow, 1970). 'Affectionless psychopathy' said to be found in some maternally deprived children may be due to the failure to form bonds or attachments with anyone in early childhood. Whilst the most significant bond is usually formed with the mother, it does not necessarily have to be so (Freud & Dann, 1951; Schaffer, 1977).

c) Delinquency and anti-social behaviour

Delinquency and anti-social behaviour have been seen by some workers as a consequence of maternal deprivation (Bowlby, 1946). However, factors other than this have been postulated by others to be important. Rutter (1972) points out that research studies have shown that family conflict, parental separation and divorce are associated with delinquency in children, and may be more significant than absence itself.

2. Short-term effects

Conclusions drawn by some of the researchers about the short-term effects of deprivation have also been questioned.

The short-term reactions to a separation experience have been reported as firstly protest, secondly despair and finally detachment. However as Rutter (1972) has suggested, certain modifying influences may reduce or remove the likelihood of these reactions in individual children. Such influences include age, sex and temperament of the child, the mother-child relationship, previous separation experience, the presence of familiar people other than the mother and the nature of the circumstances surrounding the separation. Also, these reactions, when they are observed may be due, not only to separation from the mother, but also to the strangeness of the new environment a disturbed mother-child relationship before the experience and/or loss of adequate care.

Many of the problems of interpretation found in earlier studies were the result of methodological inadequacies. In more recent research investigating both animal and human infants, attempts have been made to overcome these inadequacies. Michael Rutter (1972) states that increasingly there is a 'focus on ..... why and how children are adversely affected by those experiences included under the term maternal deprivation, rather than spending time on whether they are affected'.

In animal studies it has been possible to control stringently such variables as length of separation and type of environment before, during and after the experience. Hinde and Spencer-Booth (1971) investigated the effects on young rhesus monkeys of brief separations from their mothers. They controlled for both the length and number of brief separations and found that two separations lasting

six days appeared to have no more adverse effect than one six day separation.

In an experiment on the effects of long term separation, Novak and Harlow (1975) found that exposing maternally deprived young monkeys to other young monkeys led to the development of increased social behaviour in the former. This, the researchers suggest, indicates that for their monkeys at least, the effects of isolation are reversible, given an appropriate remedial environment.

Whilst animal studies provide the advantage of enabling investigators to create and control environments, the results obtained are not directly applicable to human subjects. In studies of the effects of maternal separation and other associated phenomena, attempts are being made to remove ambiguities and develop theories and explanations which are less vague and general.

Individual differences in response to separation experiences have been examined. Rutter (1970) concludes, both from reviews and his own research, that boys are more vulnerable to ill effects than girls. Thompson and Grusec (1970) discuss how an individual's responses may be influenced by his inherited adaptability and response to stress.

External variables influencing the outcome of separation experience have also been scrutinised. For example Wolkind in an unpublished study reported in Rutter (1972) found that children from institutions in which house mothers changed infrequently exhibited less emotional disturbance than those children who experienced frequent change of house mother. Tizard and Rees (1965) studied

a group of 26 children aged 4½ years continuously reared in institutions since early infancy, the institutions, in many respects being of high quality. The institutional children had no more frequent problems than the control group of 30 working class children living at home, although the pattern of problems was different. The institutional children's most frequent problems were poor peer relationships, temper tantrums, clinging and poor concentration. The problems found in the control group were essentially disciplinary. Rutter (1971) has concluded that children who experienced separation early suffered less if later they were reared in an harmonious family setting.

Attempts are being made to identify particular mechanisms underlying specific findings. The acute distress observed after separation has been ascribed to a distortion of the mother-child relationship, that is, not simply to separation from the mother, but deprivation of maternal care (Robertson & Robertson, 1968). The syndrome termed 'affectionless psychopathy' has been attributed to failure to form bonds (Tizard & Tizard, 1971), or adverse family circumstances before separation (Wolkind, reported in Rutter, 1972). Delinquency is increasingly seen as associated with family discord (Rutter, 1971) and others have pointed to the importance of problematic or non-existent relationships with the father (Andry, 1960; Biller, 1974). Developmental retardation and intellectual impairment have been related to deprivation of perceptual, linguistic and other environmental stimulation (Rutter, 1972; Yarrow, 1961).

No longer is there universal acceptance of the view that experiences occurring in the first few years of life exert an irreversible influence on later development. Studies that have attempted long-term follow-up of children who have undergone traumatic experiences early in life have not found it inevitable that problems result (Davis, 1947; Kolejkova, 1972; Lewis, 1954). Rutter (1972) concludes that 'the degree of reversibility depends on the duration and severity of the privation, the age of the child when privation ceases and how complete is the change of environment'.

Alternatives are being proposed to what has been termed the critical period model. According to this model adverse circumstances occurring at a particular point in the child's development may have a very specific effect at that time, yet have no effect or a different effect earlier or later. Danziger (1971) considers that an interactional model of development is more valid. That is one which considers development to be a continuous process with the child and his surroundings influencing each other and the outcome. Clarke and Clarke (1976) have formulated what they refer to as a 'wedge hypothesis'. They suggest that potential responsiveness is greatest during the early stages of development and tails off until adulthood when the potential is much lower. Thus, whilst greatest change is likely to occur in the early years, it is possible throughout life.

Therefore, whilst it is not the intention to suggest that early experience is unimportant, it is considered by some to have been overemphasised. Its long term role by itself is limited and the modifying effects of later experiences are perhaps more significant.

As Clarke and Clarke (1976) have stated 'It appears that there is no psychosocial adversity to which some children have not been subjected yet later recovered'.

Paternal Absence

Increasingly in recent years interest has been shown both by private citizens and public welfare agencies in the problems experienced by one parent families. This increase in interest may be seen both in the spread of 'self-help' groups such as 'Gingerbread' an organisation designed to aid single parents, and also in the commissioning and publication of official reports. For example, the Finer Report, published in 1974 was concerned to identify the particular difficulties experienced by one-parent families and also to formulate proposals designed to help alleviate them. Also there was the Seebohm Report (1973) which was intended to examine the particular difficulties experienced by Naval families and to consider their special welfare needs. These needs were seen as in part brought about as a consequence of their greater geographical mobility and in part brought about by intermittent absence of the husband/father.

In the majority of one-parent families it is the father who is absent. Like maternal absence, the term paternal absence has been applied to a number of different situations.

The most extreme and final manifestations occur either when the father is absent because of his death or when he has never been in contact with the child in those cases where the mother acts as single parent. Whether the child is old enough to be aware of the fact,

absence of the father is total and final. Absence of the father because of parental divorce or separation may be almost as total, as in some cases he disappears from the family completely. However, in others he is given, and takes advantage of frequent access. In this case the influence of the father is not completely lacking.

The family may experience temporary father absence for a number of reasons, the most frequent one being the father's occupation. This may require him being away from home for lengths of time varying from days to years.

Finally, some children may be almost completely without the influence of the father, even though he may live permanently at home. He may work for long hours, leaving home before his children are awake and returning when they are asleep. Shift work may mean that the father sleeps at the times when his children are awake. Also there are families in which the father has no involvement with the children, spending his leisure time away from them.

Each of the situations described above is different, not simply in terms of the quantity of absence, but also qualitatively in terms of what the absence means to the family.

Whatever the situation that has led to the permanent absence of the father from his family, the wife and children of such a family will experience some problems in common. A reduction in income, often resulting in a lowered living standard and even poverty, is one of the main practical problems and also imposes an emotional strain (Finer, 1974; Marsden, 1969; Wynn, 1964). Related to this is the frequency with which fatherless families live in inadequate accommodation and

their high geographical mobility (Wynn, 1964). Another problem is that the mother has the task of being the only permanent adult caretaker, and, without adequate support from relatives, friends, or social agencies, may experience this as excessively demanding (Brandwein, Brown & Fox, 1974; Marsden, 1969).

Families, fatherless because of divorce or separation have difficulties peculiar to their situation. As Schlesinger (1964) has pointed out, their social acceptability is lower than those in which the father has died, although the extent of the stigma would depend on the status of the other families in the neighbourhood. Frequently there would have been a considerable amount of conflict in the home before the separation or divorce took place. In some cases this conflict may have been of greater significance to the family than the divorce or separation itself (Rutter, 1972).

When a marriage breaks up the partners may have difficulty in coming to terms with the failure. Mothers may feel guilty, angry, frustrated, resentful, (Freudenthal, 1959) and in some cases may break down completely. Marsden (1969) found that a quarter of a sample of divorced women needed some form of psychiatric care following the divorce. Chester (1971) found that only 20 out of a sample of 150 divorced women said their health had not been affected by the break up of the marriage. A further difficulty is that parents may attempt to use the children as weapons against each other (Marsden, 1969).

Whilst the problems of those families experiencing temporary absence may be less severe, they are nevertheless present. To an

extent such families may have problems similar to those experiencing permanent absence, particularly if the father is away for long periods. Duvall (1945) found that 90% of a sample of 67 Servicemen's wives reported themselves to be lonely. The wife may feel resentful because of her husband's absence and may find being the sole parent very demanding, influencing the way in which she interacts with her children. Three studies of British Royal Naval wives (Grubb et al, 1970; Matthews, 1969; Seebohm, 1973) reported problems experienced by women whose husbands were away intermittently because of their work. Matthews reported problems related to the mobility of naval families which could lead to housing, school and neighbour difficulties. Also women reported problems associated with separation, the difficulty of fulfilling a dual parental role, depression and anxiety about the father. Finally problems associated with the father's return were reported, conflict of discipline techniques, financial problems and the re-emergence of marital difficulties. Seebohm (1973) reported wives as having financial and accommodation problems as well as having problems in dealing with the separation. (Grubb et al, 1970) reported a higher incidence of psychiatric problems in a sample of naval wives compared to that of a sample of civilian wives of the same age.

Families experiencing temporary absence because of the father's occupation would not have the same problems of poverty or social stigma, however. Nor would the problems of adjustment to loss be as acute as it is known that he will return.

Intermittent absence may bring with it difficulties in the father-child relationship. This may be distorted either because the father is idealised (Bach, 1946) or alternatively because the mother may hand over all disciplining to him while he is at home, thus giving the child an excessively negative view. Times of return and departure may be disruptive for the family, in the former case because of a disruption of the routine and/or a re-emergence of marital difficulties, in the latter because of the distress caused by the temporary loss of the father (Matthews, 1969).

Thus different absence experiences are different, not simply in terms of the quantity of absence, but in terms of what the absence means to the family. Permanent absence and temporary absence will differ qualitatively and absence due to lack of interest will be experienced differently from absence due to occupation.

Few attempts have been made to compare children experiencing temporary and permanent father absence (FA). One of the aims of the present investigation was to make such a comparison. Both children experiencing permanent FA due to the divorce of their parents and those experiencing temporary FA as a result of their fathers' occupation were studied.

This review will concentrate on studies of children and adolescents. Some workers have studied adults who have experienced FA in childhood. For example Altus (1958) and Leichty (1960) were interested in personality factors whilst Bieri (1960), Landy, Rosenberg and Sutton-Smith (1969) and Louden (1973 - reported in Biller, 1974) investigated cognitive abilities. Also there exist

studies that have attempted to relate psychopathology in adulthood with parental absence, including FA, in childhood (Abrahams & Whitlock, 1969; Brill & Liston, 1966; Brown, 1961, Cobliner, 1963; Da Silva, 1963; Gay & Tonge, 1967; Gregory, 1958; Martindale, 1972; Munro & Griffiths, 1969).

Studies which attempt to relate one variable in past experience and relate it to a present condition are open to serious criticism. Researchers select that one variable out of the adult's past experience and assume that similarities between him and other adults are due to the fact that they have that variable in common. Similarities existing between adults may be the result of a variety of past experiences and not simply the one selected by the researcher.

Given this criticism it was decided to study children without a father at an age when, for most he would be present. Therefore only brief reference will be made to adult studies in this review.

For the purposes of review, research into FA will be divided into three sections:

1. Research investigating sex-role development
2. Research into cognitive functioning
3. Research into personal adjustment

1. Research investigating sex-role development

If the literature concerned with father absence is examined, one difference between it and that concerned with maternal absence becomes apparent. There are numerous studies investigating the effects of father absence on socialisation related to the development of

sex-role. That is how the child learns what to do and feel appropriate to his or her gender. In contrast, little attention has been paid to sex-role development by those concerned with maternal absence. Why should this be so?

Two related explanations may be put forward. Firstly, examining the emphasis of FA research we find that, whilst some studies of female sex-role development do exist, in the majority of cases the question being asked is whether FA has any detrimental effect on male sex-role development. Reasons for this emphasis may be found if social attitudes to male and female sex-role are examined.

In childhood, for a boy to be called a sissy or to be accused of girlish behaviour is seen as much more negative than for a girl to be called a tomboy (Hartley, 1959; Walstedt, 1974). If a young woman chooses to follow a career instead of marrying, or in addition to marrying and raising a family, this is increasingly accepted. However, if a man chooses to stay at home and care for children rather than work outside, then such acceptance is not forthcoming. Male homosexuality is far less tolerated than female, as can be seen from the existence of legal sanctions against the former, still operating in many places (eg. Australia) and the lack of such sanctions against the latter (Plummer, 1975). Thus, as society views problems in male sex-role development as more important than female, the emphasis of the research may reflect this view.

Given the greater concern with male sex-role development, a related reason for the interest shown in FA and sex-role development might be that in many of the theories that consider male sex-role

development the father is considered to play a crucial role. Three examples of such theories will be considered here.

In Freudian theory (Freud, 1924) the boy, during what Freud refers to as the genital phase, is seen to have positive sexual feelings for his mother and to feel jealousy towards the father. However, as the father is also feared by his son, this leads to the development of high anxiety. The boy reduces this anxiety and vicariously gains the affectional gratification experienced by the father, through 'identification'. Identification here refers to the internalisation of the behaviour and qualities of the father, so that they become the child's behaviour and qualities. The girl identifies with the mother as a means of resolving the rivalry with her for the father (Freud, 1950). Freud spends little time considering the female however, his theory concentrating on the male.

Freud saw identification as preceding sex-role development. Father absence, according to the theory, would interfere with identification and consequently sex-role development in the male. It could be assumed that maternal absence would also result in problems because the boy would lose the driving force towards identification, the wish to possess the mother, but this is not considered by researchers.

In support of the theory, it is the case that boys and girls begin to imitate same sex adults at about the age that Freud predicts (Kohlberg, 1966; Mischel, 1966). However, empirical evidence for the existence of the internal mechanisms is difficult to obtain. These internal mechanisms have no adequate operational definition. Also, the

only way that the theory may be tested, according to its supporters, is by psychoanalysis a procedure whose objectivity is questionable.

Learning theories of sex-role development (eg. Mowrer, 1950; R.R. Sears, 1957), like Freudian theory assert that the presence of the father is important for sex-role development in boys. It is suggested that both boys and girls identify initially with the mother, who in infancy and early childhood, is the main source of reward. For girls all that is required is that they maintain their initial identification with the mother. Boys must however shift from this initial identification, a shift that occurs as the boy begins to perceive that the father is a more powerful source of reward than the mother. Why this should not be perceived by girls also is not adequately explained. However, in both boys and girls identification is considered to be an acquired drive, developing because the same sex parent is perceived as an important source of reward. Therefore, FA would, according to the theory, interfere with the sex-role development of boys but not girls.

Again the existence of an internal mechanism, this time termed a drive, is said to be involved. However, as with Freudian theory, the existence of such a mechanism is hard to prove. It can only be inferred from the observation of what the child does. One way of providing support for the theory would be to demonstrate that absence of the father results in problems in sex-role development for the male. However, the review of research that follows provides little evidence for this.

A third type of theory, Social Learning Theory (Mischel, 1966) differs from the first two. This theory asserts that it is not necessary to consider internal mechanisms in order to explain sex-role development. What others term identification, referring to an internal mechanism, in this theory is simply seen as imitation. That is, adults' behaviours and attitudes are copied by the child. Imitative behaviour of the same-sex parent is systematically rewarded. Certain factors, such as the perceived power of the adult and his or her warmth make imitation more likely. FA according to this theory would cause problems in the sex-role development of both boys and girls because for boys an important model is absent and for both sexes an important source of reward for sex-appropriate behaviour is missing.

There are criticisms of this theory. Firstly, it is unlikely that if imitation and reinforcement were the only mechanisms involved in the acquisition of sex-appropriate behaviour, that they would be sufficiently consistent for adequate learning to take place (Bee, 1975; Kohlberg, 1966). Also, social learning theory does not take into account the cognitive awareness of the child of his or her gender. Once a child has a permanent concept of him or herself as male or female it would take extremely powerful and consistent reinforcement to make that child behave in a way inconsistent with that concept. Finally, as Danziger (1971) has stated the assumption behind the theory is of a one way system, but he asserts that the adoption of sex-appropriate behaviour is as much the cause of social reinforcement as the social reinforcement is the cause of the sex-appropriate behaviour.

The above are examples of theories of sex-role development that consider that the father has an important role to play, particularly in the case of boys. Therefore, investigation of FA, if it indicated the presence of problems in sex-role development, would provide some empirical support. However, the review of research that follows will demonstrate that there is no conclusive evidence to support the existence of such problems.

Not all theories attach such importance to the father. Cognitive theories of sex-role development attempt to link this development with cognition. Kohlberg (1966) suggests that, as with other concepts, the child first learns his or her own sex label and then begins to learn its correct application. The development of this concept follows the same pattern as that of other concepts.

By the age of 5 or 6 years (the Piagetian concrete operations stage) the child learns the permanence of the characteristic of sex. Only after this does he or she place value on sex-appropriate objects and activities and imitates the behaviour of same sex models preferentially. In Kohlberg's theory, attachment to the same sex parent develops with this imitation. That is, identification with the same sex parent occurs in the reverse order to that put forward in the other theories described. Kohlberg says that the child must develop a stable, permanent sex-identity before identification with the same-sex parent can occur. Other theories suggest that identification with and/or imitation of the same sex parent must occur first if adequate sex-role development is to take place. Therefore to Kohlberg, sex-role development is primarily a cognitive process rather than one associated with imitation or

identification with one person. If this theory is accepted it could provide an explanation for the finding that the sex-role development of many father absent children appears to progress without difficulty. Whilst identification with the father might be adversely affected, the formation of the appropriate sex-role concept would not necessarily be influenced.

In spite of the fact that the relationship between FA and sex-role development has been considered of great importance by many researchers it was decided to omit this area from the present study. The reasons for this omission, will it is hoped, become clear in the review that follows.

It is the intention in the review of the literature to demonstrate three things. Firstly that there is confusion about what is being measured in studies of sex-role development. Secondly that there is little agreement about results and interpretation of results is open to question. Thirdly, that as it has been studied, in its relation to FA, the concept of sex-role development is of limited relevance as a predictor of outcomes for the child or adult, or as a predictor of the incidence or type of problems that might develop.

In early research sex-role development tended to be seen as a unidimensional concept. Several writers had, however, attempted to define different aspects of sex-role (Brown, 1956; Kagan, 1964; Lynn, 1959). Lynn separated three different, but related components of sex-role. Two of these referred to internal states and one to overt behaviour. Sex-role preference was the name Lynn gave to the individual's desire to adopt the behaviour associated with one sex or

another. Identification referred to the incorporation of the role of a given sex and to the acquisition of the unconscious responses characteristic of such a role. Adoption referred to the overt behaviour.

Biller and Borstelmann (1967) modified Lynn's definition substituting sex-role orientation for identification. Orientation remained an internal concept but to Biller and Borstelmann referred to self-image. These three aspects of sex-role were not seen to develop simultaneously. Biller and Borstelmann considered that orientation developed first during the child's second year, followed by preference and finally adoption. One major problem with this theory is that it is contradicted by evidence from child development studies, particularly Piagetian studies. According to Piaget, the child does not develop any permanent stable concepts until the concrete operations stage at about 5 to 6 years of age. The child exhibits sex-related behaviours before this in terms of the toys it chooses to play with, the imitation of same sex adults and so on, but according to this theory could not have any stable self-images at 2 years old. As Biller and Borstelmann see the self-image as a prerequisite of the development of preference and adoption serious difficulties arise. This approach also conflicts with that of the social learning theories in which no necessity is seen for the existence of internal mechanisms to explain sex-role development. They see sex-role development simply in terms of adoption brought about by imitation.

Thus, a problem of definition exists. It is an oversimplification to see sex-role development as unidimensional and in any case there is

no agreement about whether the one dimension refers to an internal or external mechanism. Also attempts by those studying father absence to identify different dimensions will be shown to be unsatisfactory.

Research will be examined according to the measuring technique used. Criticisms related to these techniques will be presented at the end of each section. Other, more general criticisms will be considered after research in all sections has been reported. Many of the studies are of males, although some studies of females do exist.

a) Research employing projective techniques

It has been shown that identification with the same sex is seen by many theorists as a necessary prerequisite of adequate sex-role development (eg. Freud, 1924; R.R. Sears, 1957). Others, whilst not referring to identification still see the necessity for the existence of some sort of internal mechanism (Biller & Borstelmann, 1967). Attempts have been made to measure such internal mechanisms by means of projective tests. Examples of these are Doll Play techniques, the IT Scale for Children (although this was intended by its designer to measure overt masculine and feminine behaviour - Brown, 1957), the Blacky Test and the Thematic Apperception Test.

Considering first those studies that have reported differences between FA and Father Present (FP) children using projective measures it is found that some differences have been reported for boys but not for girls.

i) Doll play. A structured doll play technique was a measure used in some early studies (Bach, 1946; Lynn & Sawrey, 1959; P.S. Sears, 1951; R.R. Sears et al, 1946; Stolz, 1954; Tiller, 1958).

The stories produced in these play situations were considered to portray children's fantasies, and these fantasies were classified according to the interest of the researcher. Bach (1946) studied 40 children aged between 6 and 10 years of age, half were males and half females and all were classified by Bach as being lower middle class. Twenty children had experienced FA of between one and three years because of the father's military service and these fathers were still absent at the time of the study. Each reported that the fantasies of the FA boys indicated the father to be less aggressive both towards the children and the mother. He concluded that the FA boys had an idealised, feminised fantasy of the father. No differences were found between FA and FP girls.

R.R. Sears et al (1946) and P.S. Sears (1951) conducted similar studies on 3 to 5 year old children again classified as lower middle class. R.R. Sears et al investigated 66 FA children divided equally into three age groups, 3 years, 4 years and 5 years. These children were compared with 60 children who had not experienced FA, also equally divided between the age groups. Again FA was due to military service. FA boys exhibited lower amounts of aggression in their doll play. This lower level of aggression is taken to demonstrate problems in sex-role development. No differences were found between FA and FP girls. P.S. Sears (1951) in a similar study again found that boys who had experienced FA showed lower aggressive fantasy in their doll play than did FP boys. As in the other studies no differences were found between FA and FP girls.

Contradictory findings were reported by Stolz (1954). She studied 19 families in which the father had been absent at the birth and during the early childhood of the first born because of military service. These children were compared to first born children from matched control families from which the father had not been absent. All children were classified by Stolz as middle class. In the experimental group 12 of the first born children were males and seven females.

As part of her assessment Stolz employed a doll play technique and found little difference between the control and experimental group males. She did report, however, that the doll play of the males in the FA group was slightly more aggressive than in the FP group.

Thus in four different studies of predominantly middle class children three reported a lower incidence of aggressive fantasy in FA boys and one reported a slightly higher incidence of aggression in this group.

Tiller (1958) and Lynn and Sawrey (1959) both studying the same children also used a doll play technique as part of their assessment of the effects of FA. However they did not measure aggressive fantasy. Forty mother-child pairs from the families of Norwegian sailors were investigated (FA group) and compared to a control group of 40 children. The fathers in the control group were not taken away from home by their occupation. In the FA group the children were all children of Naval officers and in the control group fathers had occupations of similar status. The ages of the children in both groups ranged from 8 years to 9½ years. Tiller did not

analyse his results separately by sex, but like Bach (1946) he found that children in the FA group displayed an idealised, feminised picture of the father. The analysis of Lynn and Sawrey did examine sex differences and they found that FA boys more often picked the father doll than the mother doll when given a choice. They conclude that this indicates that FA boys were insecure in their identification with the father. Another difference between FA and Father Present (FP) boys was that the FA boys were more likely to select a crib than a bed in the doll play. This Lynn and Sawrey take to indicate the lower level of maturity of FA boys. One study by Santrock (1970) used a doll play technique as part of an investigation of FA and FP boys and girls classified as lower working class aged from 4 years 5 months months to 5 years 11 months. Thirty boys and 30 girls were studied, 15 of each sex having a father present in the home and 15 experiencing FA of at least two years. The doll play technique was used to investigate masculinity/feminity and dependency. Santrock found that FA boys obtained significantly more feminine and more dependent scores also lower aggression scores than did FP boys. No differences were found between FA and FP girls.

ii) Other projective techniques. As well as the doll play technique other measures have been used in an attempt to investigate internal mechanisms involved in sex-role development. Biller and his associates have adopted the theoretical formulation of Biller and Borstelmann (1967) and have used projective techniques in an attempt to measure sex-role orientation, the child's internal self-image. In a book published in 1974 Biller concludes that, for boys of the

three aspects of sex-role he and Borstelmann defined, adoption, preference and orientation, it is sex-role orientation that is most affected by FA, especially if that absence occurred before the boy was 4 years of age. However, the evidence to support this assertion is not substantial, even if the existence of an internal mechanism, sex-role orientation is accepted.

Biller, and those working with him have most commonly used the IT Scale for children, the ITSC, (Brown, 1957) to measure orientation. There is some doubt, however, about the validity of this scale. The ITSC consists of four sub-tests, toy preference, role preference, child figure choice and parental role choice. In the early form of the test the child was given a card on which was drawn a stick figure of supposedly ambiguous sex and was asked to respond to test items as would the figure on the card. Masculinity/femininity was considered to be a unidimensional concept. A high score on the scale was taken to indicate masculinity and a low score femininity. However, early validation studies (eg. Brown, 1958) established that, especially with young children, whilst boys did obtain a higher score than girls, girls' scores were still closer to the masculine end of the scale. Research demonstrated that the major factor in the production of these scores was that the figure presented to the children was seen by them as male (Hartup & Zook, 1960; Lefkowitz, 1962). Attempts were made to overcome this difficulty by presenting a 'neutral' face rather than the whole figure (Biller, 1968a), but the problems of making a face neutral must be as great as for the figure as a whole.

Aside from the methodological problem, it is also possible to question the appropriateness of the test as a measure of orientation. Brown (1957) devised the Scale as a measure of sex-role preference. Biller however, seems to infer firstly that it is a projective test and that it is designed to measure orientation. In 1974 he states 'such a procedure can be assumed to assess sex-role orientation'. He does not give the grounds for this assumption.

Turning to the results of research on orientation, Biller reports differences between FA and FP boys in their ITSC scores. Biller (1968a) used the ITSC and the Draw a Person Test to investigate the sex-role orientation of 186 kindergarten-age boys. The boys were classified by him as predominantly middle class. Twenty boys were absent from their fathers. He reports results indicating that FA boys obtained lower masculine scores on these measures, from which he concludes that they have lower masculine orientation. Another study by Biller (1968b) examined a group of 6 year old boys classified as being from lower socio-economic status (SES) families, again using the ITSC. His subjects consisted of 15 negro boys and 14 white. Six negro boys and five white boys had been absent from their fathers for at least two years. Results showed that the FA boys obtained lower masculinity scores on the ITSC which as before Biller takes to indicate a lower masculine orientation. This result is similar to that obtained in a study by Hetherington (1966) in which she investigated 32 negro and 32 white boys aged between 9 and 12 years, all classified as lower SES. Half of the boys were FA and of these 50% had been away from their fathers since the age of 4. All boys were given

the ITSC and Hetherington found that early FA boys obtained lower masculine scores than did either FP or late FA boys. Hetherington concluded that this lower score indicated inadequate masculine identification. In a paper published in 1969 Biller reports similar results. In this study subjects were 34 5 year old white boys. Seventeen had been absent from their fathers for at least one year. Subjects were matched for SES level in terms of a five level scale of parental occupation and were also matched for IQ and sibling distribution. Again the ITSC was used as a measure of sex-role orientation and again Biller reports that the FA group obtained significantly lower scores.

Two studies of older children arrived at similar conclusions. Biller and Bahm (1971) studied 20 FA and 20 FP junior high school boys matched for age, grade level, IQ and SES and also sibling distribution. For these older boys they used a different measure of orientation, an adjective check list. No evidence is presented for the validity of such a measure as a measure of self concept rather than preference. Biller states that 'this resulted in what could be termed a masculine percentage score which was assumed to reflect masculinity of self concept'. He does report that in a pilot study males obtained significantly different scores from females. Results of this study indicated that FA boys obtained significantly lower masculinity scores on the check list. Burton (1972) studied Carribean boys aged between 8 years and 15 years. He measured their responses on the Draw a Person Test and found that boys who had experienced FA during the first two years of life draw a male figure less often. The conclusion drawn by Burton was that this indicated a lower masculine orientation. However,

an equally plausible explanation might be that the children drew the people they were closest to. In the case of FA boys this was more likely to be the mother.

Some studies investigating FA and FP children have found no differences in their responses on projective measures. In studies already reported little difference was found between FA and FP girls (Bach 1946; Lynn & Sawrey, 1959; P.S. Sears, 1951; R.R. Sears et al, 1946; Santrock, 1970; Stolz, 1954). Hetherington (1972) studied lower SES and lower middle class first born adolescent white girls aged between 13 and 17 years. Three groups of 24 girls were investigated, one group in which the father was present, another in which fathers were absent due to divorce and a third in which absence was due to death. Amongst other measures Hetherington used a projective technique, the Draw a Person Test. She found no differences between the three groups on this measure.

Studies also exist that demonstrate no differences between FA and FP boys in their responses to projective measures. Greenstein (1966) investigated 75 delinquent boys aged between 13 and 18 years; 25 boys had experienced at least three years FA before the age of 12 and 50 boys had experienced less than one year of FA. He found no differences between the two groups in their performance on the Rorschach and Figure Preference Tests, nor in their TAT protocol. Donini (1967) compared 60 lower SES negro boys aged between 13 and 19. All boys had IQ scores of between 70 and 90. Thirty boys had spent all their adolescent years (13+) and at least three years before age 12 absent from their fathers. The remaining 30 had experienced less than a year's

absence. There was no difference between the two groups in their performance on the Draw a Person Test. Harrington (1970) studied 118 boys classified as predominantly working class who had been referred to a psychiatric clinic. He found no differences between the boys in their responses to the Franck Drawing Completion test that could be associated with FA. In this study Harrington used type of problem as the independent variable and absence as a dependent variable.

A further investigation by Cohen (1971) found no differences between FA and FP boys. Cohen studied 40 pre-adolescent white males, 20 classified as Working Class and 20 classified as Middle Class. Ten males in each group were FA and 10 FP. Each subject was given a projective test, the TAT and no differences were found between the groups in their responses.

Thus a number of studies using projective measures have been carried out and a variety of results obtained. Results of these types of measures consist of an interpretation of a subjects response, usually called a protocol. That is, the subject does or says something and the scorer draws inferences from this. Whether the inferences made are accurate is open to question as the subjectivity of the scorer and his interpretations are so heavily involved. For example, inferences are drawn about a child's identification from the fact that he or she chooses a male doll rather than a female doll. Other simpler interpretations are possible. Perhaps one doll may appear more attractive to the child because of the colour of its clothing. Having made an assumption from the response or action about

its hidden meaning, the researcher then goes on to make a second stage interpretation. That is that for example, problems of identification considered to be revealed will have an influence on the child's life. There is no evidence that such a two stage interpretation is valid. A final point about the validity of results refers to the assessment of aggression. Early studies in particular (eg. Bach, 1946; P.S. Sears, 1951; R.R. Sears et al, 1946) have used projective measures to assess aggression. Researchers draw conclusions about a stable characteristic or trait 'aggressiveness' from behaviour reflecting a current state demonstrated by the child in a particular situation. No evidence to justify such conclusions is provided.

b) Research employing Masculinity/Femininity Scales

Before examining contradictions in findings, research employing Masculinity/Femininity (M/F) Scales will be examined. Assessment of M/F is seen by some as a way of assessing the 'adequacy' of sex-role development. Males are expected to obtain predominantly masculine scores and females feminine. Scales have been devised that have attempted the measurement of M/F. Examples of these are the ITSC (also considered by some eg. Biller, as a projective measure), the M/F scale of the Minnesotta Multiphasic Personality Inventory (MMPI), the California Personality Inventory (CPI) and the Gough Femininity Scale. Items are selected on the basis of their discrimination between males and females and they cover such areas as activity preferences, occupational preferences, anxieties and emotional reactions, psychosomatic symptoms, leadership, self-confidence and aggression.

A number of studies exist that compare the responses of FA and FP children to this type of scale. As with the assessments employing projective techniques contradictory findings have been reported for boys and few differences have been detected between FA and FP girls. One study in which the authors did find differences between FA and FP boys was that by Santrock (1970). This study has already been referred to in the previous section (see p.30). Santrock measured M/F using a card selection technique. He reported that FA boys obtained more feminine scores than did FP boys. That is, their selections were closer to those made by girls. There were no significant differences found between FA and FP girls.

Other research exists in which no differences were found between FA and FP boys in their responses to M/F scales. Two studies already mentioned as using projective techniques also employed M/F scales (Greenstein, 1966, p.34; and Harrington, 1970, p.35). Greenstein used the Vassar College Attitude Inventory and found no differences in the responses of FA and FP delinquent boys. Harrington used Gough's Brief Femininity Scale and found no differences associated with FA in the responses to this scale.

Keller and Murray (1973) investigated 57 negro boys, all approximately 6 years old from a Miami ghetto. Twenty eight were from homes in which the father had been absent for at least three years. The other boys came from intact homes. The authors found no differences in the boys' scores on a picture choice masculine/ feminine preference task. Barclay and Cusumano (1967) investigated 40 male adolescents whose mean age was 15.40 years. Twenty had been

FA since age 5 and 20 were FP. . In each group 10 boys were white and 10 negro. Subjects were matched for age, grade point average, IQ and SES. All subjects were given the Gough Femininity Scale and the semantic differential. No differences were found between FA and FP boys in their responses on these measures.

A final study to be examined investigating girls only was conducted by Hetherington (1972). She studied 72 girls aged 13 to 17 years from mixed SES families. Twenty four girls had experienced FA due to divorce, 25 FA due to death and 24 were from intact homes. There were no differences between the groups in their mean age, education, occupational status and SES. No differences were found between the groups in their responses to the CPI.

Thus in only one study, that of Santrock (1970) were any differences found between FA and FP boys in their responses to M/F scales. No studies report differences between FA and FP girls. In any case the use of these scales is open to much criticism. A first criticism is that the relevance of the scales decreases with their age. Such things as male and female roles in Western Society have been changing so rapidly that the items reflect outmoded concepts of what society accepts as masculine and feminine (Herzog & Sudia, 1970; Pollack, 1967; Vincent 1966). A second criticism is that items are culture and social class bound. Different cultural and social class groups have different attitudes and norms. A test constructed on the basis of the norms of one group is not applicable to another (Constantinople, 1973). Educational level, too, seems to have an influence on results. Those males and females of a higher educational

level tend to obtain more similar scores (Constantinople, 1973). A third criticism is that the items of the scales are simply related to social desirability and conventionality. It is possible that all they are measuring is subjects' ability to respond in a culturally stereotyped way (Block, 1973). Finally, there seems to be an assumption inherent in almost all the scales that M/F is a unidimensional concept. This is evident because item selection is based on the ability to discriminate between the responses of the two sexes. The implication is that a masculine response is the opposite of a feminine response. Also the scales use a single score to indicate both masculinity and femininity, high scores indicating one, low the other (Constantinople, 1973). As Herzog and Sudia (1970) point out, it may be the case that well adjusted males and females share many of the same qualities. It is also questionable whether extreme masculine or extreme feminine scores on the scales are an indication of satisfactory adjustment. If the content of the items is examined it may be seen that those males who obtain very high masculine scores would be highly aggressive and dominating, whilst those females who obtained high feminine scores would be passive and ineffectual.

c) Research employing interview techniques and behaviour reports

A final section of results to be reviewed will be those that derive from measures that do not fit into the two categories described above. Studies have been carried out comparing FA and FP children using interview measures, teacher ratings, observation etc., to assess aspects of sex-role development, and these will be considered now. Measures such as teachers' reports and parental interviews are open to

criticism as the responses they provide may be biassed. The parent may wish to present a more positive than realistic picture of the child, the teacher may provide an unduly negative report of a boisterous pupil. However, useful information may be gained from those who spend many hours in contact with the child.

Some of the studies to be included in this section have already been referred to as they have used projective measures and/or M/F scales as part of their assessment. Santrock (1970) used a maternal interview as part of his assessment of sex-typed behaviour. He found that FA pre-school boys were reported as exhibiting more feminine behaviour and were less aggressive and more dependent than FP. All of these are taken to indicate a lower level of masculinity. No differences were reported between FA and FP girls.

Three studies by Biller (1968a, 1968b, 1969) found no differences between FA and FP boys in the extent of their adoption of masculine behaviour as rated by their teachers. A study by Hetherington (1972) of FA and FP adolescent girls used interviews with mothers and observational measures. The only difference between the girls was found to be in their behaviour in interaction with males. Compared to girls with fathers dead or fathers present girls whose parents were divorced demanded more attention from males and were more proximity seeking.

One study not referred to before is that of McCord, McCord, and Thurber (1962). They studied 255 boys from lower SES families. One hundred and five boys had lost one or both parents for a variety of reasons and 150 were living with both natural parents. This was

a longitudinal study, boys being investigated for five years between the ages of 10 and 15. Assessment was by trained social workers who visited homes once every two weeks. Case records produced by these visits were rated by a researcher on a number of variables. Results showed that FA boys were rated as more aggressive but more feminine in other areas, for example, exhibiting greater dependency (seen as a feminine characteristic). This pattern was most likely to appear if the boys became father absent between the ages of 6 years and 12 years. McCord, McCord and Thurber suggest however, that it might be family conflict before the boys became father absent that was more important than the absence itself.

d) A critique of the research investigating FA and sex-role development

i) Research investigating females. Turning to an examination of the findings as a whole, results involving females will be considered first. Biller and Weiss (1970) in their review and also Biller (1974) in his book, assert that FA has an effect on the sex-role development of girls. However, an examination of research provides scant support for this assertion. Most of what they consider to be support for this view is derived from inferences from the finding that girls who have experienced FA have greater difficulties in their interactions with males during adolescence and later (eg. Hetherington, 1972). An alternative explanation might be that the girls have no opportunity to observe interaction between their fathers and mothers. Therefore an important model of interaction between males and females is absent. Also they would not have practice in heterosexual interaction with the

father in the family setting. Both of these factors might lead to difficulties in interactions with males outside the family.

Another finding used to support the idea that FA influences female sex-role development is quoted by Biller (1974). He describes a study by Santrock (1970) who reported a non-significant trend for FA girls to achieve a higher femininity score in a doll play assessment. Biller says 'a very high level of femininity may be associated with a rigid sex-role development which devalues males and masculine activity'.

Finally, Biller quotes an unpublished study by Landy, Rosenberg and Sutton-Smith in which it is reported that some adolescent girls who had experienced FA were found to reject 'feminine interests'. This too is seen by Biller as evidence of problems in sex-role development.

Thus he reports the findings of two studies producing contradictory results. If Biller's reasoning is accepted it is difficult to see what would be considered as evidence for adequate female sex-role development.

ii) Research investigating males. If results from studies investigating sex-role development in boys are examined we find that whilst more differences between FA and FP boys are reported, contradictions are apparent. Consideration of the findings demonstrates that different results have been obtained depending on which social class the samples were drawn from. Some experimenters found no differences between FA and FP boys from lower SES groups (Cohen, 1971; Donini, 1967; Greenstein, 1966) others (Hetherington,

1966; McCord, McCord & Thurber, 1962) found that boys from these groups exhibited higher aggression than did FP boys. These results were in contrast to those obtained from the investigation of middle class boys in which lower levels of aggression and lower scores on measures of masculinity were obtained (Bach, 1946; P.S. Sears, 1951; R.R. Sears et al, 1946).

An attempt has been made by Biller (1974) to account for these differences by examining differences in social organisation in the different SES groups. Surveys of lower SES families have provided evidence to suggest that, in some of them, the organisation is predominantly matriarchal. Even if the father is not permanently absent he is seen as taking little part in family activities. This has been reported by workers studying lower SES black Americans Pettigrew, 1964; Rohrer & Edmonsen, 1960) and amongst working class families in the East End of London (Young & Wilmott, 1957).

Biller (1974) concludes that a matriarchal organisation results in the development of poor masculine sex-role orientation and then the attempt to overcompensate under pressure from peers and society. This he suggests leads to the development of high levels of aggression. If this were true it might also account for the fact that in some studies of lower SES males there was no difference found between the FA and FP groups, as even in the FP groups the influence of the father may only have been slight.

However, it has been argued that to view lower SES families as matriarchal is misleading. Jackson (1966 - reported in Herzog & Sudia, 1970) found that neither the men nor the women in the lower SES

black community that he studied through that it was the women who were most in control. Newson and Newson (1968 and 1976) studying children in an English Urban community reported that over 80% of mothers in social classes four and five, rated their husbands' participation in child rearing at least as fair. In addition there appears to be little empirical support for the propositions either that low SES FA boys have low masculine orientations or that high aggression is an indicator of compensatory masculinity. No proof of the existence of an internal mechanism such as sex-role orientation exists, nor can it be demonstrated that levels of aggression are associated with masculine development. There is little evidence that measures of aggression used in these studies correlate with the incidence of aggression outside the experimental situation. High levels of aggression exhibited may be due to frustration produced by the experimental conditions rather than by a generalised pattern of responding. The exhibition of aggressiveness forms part of our cultural male stereotype. However, aggression is a value laden term having a variety of connotations. It is not clear whether aggression in all of its manifestations or simply socially disapproved aggression is what is being referred to in the studies.

Examining the results for boys in general it appears that significant differences between FA and FP groups are more likely to be found when measures purporting to study internal mechanisms are employed. However, the results obtained from these measures are interpretations of subjects' responses and are therefore vulnerable to the influence of experimenter expectancy (Anastasi, 1968).

Fewer differences are found when measures attempting assessment of more overt behaviour are used. If differences between FA and FP boys are to be considered relevant to their development then it is necessary to demonstrate how these differences affect the children's experience. This, rather than the attempt to draw inferences from differences in internal mechanisms whose existence is debatable, is what is required.

A major methodological criticism that may be levelled against much of the research may also account for some of the discrepancies in the findings obtained in different studies. There has been little attempt to control variables that may influence results. Different types of absence mean different things to a family, and results from studies which make no distinction between, for example, absence due to death and absence due to divorce, nor between permanent and intermittent absence should be regarded with reservation. Length of absence and age of onset are also often inadequately controlled and these factors too may influence the meaning of the absence to the child (Herzog & Sudia, 1970). As well as social class other variables such as maternal influence and sibling position have been associated with differences in sex-role development in FA children and yet few studies investigating these variables have been carried out.

Biller (1969) compared five year old FA boys whose average length of absence was three years, with a control group (FP), reported that FP mothers were significantly more encouraging of masculine behaviour. He measured encouragement by means of a questionnaire. Biller and Bahm (1971) found an association between early FA, low maternal encouragement of masculinity and low masculine self concept in older

boys. No conclusions are possible from such studies, but they do point to the need for more work in the area of maternal influence. In the home in which the father is absent the mother must be considered to have even more influence on the development of her child than would be the case when two parents were taking part in child-rearing.

It has been suggested that sibling composition may be a variable that influences the effect of FA on sex-role development. Sibling composition studies have been subjected to much criticism (for example see Price & Hare, 1969) however some studies do exist that point to birth order and sibling composition as a significant variable. Wohlford et al (1971) found that FA boys with an older male sibling were less dependent and more aggressive than those without an older male sibling. Hillenbrand (1971) in a study of military families in which the father was intermittently absent, found that first born FA boys were less dependent than those born later.

At the start of this review it was stated that three things would be demonstrated. The first two, that there is confusion about what is being measured in studies of sex-role development and that there is lack of agreement and confusion about conclusions have already been discussed. The third thing to be demonstrated was that, as it has been studied, the concept of sex-role development related to FA is of little relevance to the development of the child or the adult.

An assumption that is made is that it is in some way an advantage for a male to exhibit characteristics considered masculine and

disadvantageous for him to exhibit characteristics considered to be feminine. This assumption is being increasingly criticised (Constantinople, 1973; Vincent, 1966). One study that appears to provide support for such criticism was carried out by Kagan and Moss (1962). They followed up a group of boys who had had their levels of masculinity assessed in childhood by means of an M/F scale. They found that differences in scores were related to differences in adulthood. Kagan and Moss reported that those who in childhood obtained high masculine scores had, in adulthood, occupations rated as more masculine and they rated themselves as having a sex-life more active than average. They scored lower than the second group on measures of dominance, capacity for status and self-acceptance. Those subjects who, in childhood had obtained a low masculinity score were rated as more sociable, higher on social leadership, self assurance and self acceptance than the first group. They were more inclined to introspection and lower on self-sufficiency compared to those obtaining high masculine scores in childhood. Thus differences in masculinity scores obtained in childhood were associated with differences in adults. However, it would be difficult to judge, from the personality characteristics described whether one could be considered preferable to the other.

Clarke and Clarke (1976) in a book already referred to (p.13) have made the point that early experience alone is a poor predictor of later development. Thus whilst it may be of interest to note that at a certain age there are differences between FA and FP children in some aspects of sex-role development, it is unwarranted to assume without

evidence from longitudinal studies that these differences will continue into adulthood or that the outcome of differences will be positive or negative. Herzog and Sudia (1970) cite this as being of great importance, as they suggest that studies of childhood experiences tend grossly to overpredict future pathology. They quote evidence from Macfarlane (1963) who followed up a group of subjects from infancy to adulthood. Macfarlane (1963) concluded that predictors were accurate in less than one third of cases and that no adult characteristics could be predicted on the basis of results from one measure.

Connected to the above criticism is the point that some of the conclusions drawn from the results may be questioned. The two reasoning errors that occur most frequently are firstly that association between two variables is taken to imply a causal relationship. Researchers find an association between FA and another variable and even though they do not state explicitly that a causal connection exists this is implicit in their conclusions. Closely associated with this is the second error that leads workers to see one variable among many as the significant one without sufficient substantiating evidence.

Thus there are many problems and criticisms that are associated with the attempt to investigate the influence of FA on sex-role development. Whilst it is possible that these problems may be overcome and useful results produced, it was felt that other aspects of development would provide more fruitful topics for research. It is to these that this review now turns.

2. Research investigating cognitive development

General agreement appears to exist that environmental factors exert some influence on the cognitive development of children. There are researchers who assert that it is the genetic component which is of paramount importance (Eysenck, 1971; Jensen, 1969) but they too concede that environmental variables have some relevance.

To examine in detail the evidence for the existence of associations between intelligence and environment is beyond the scope of this review. Evidence exists for the association between measured intelligence and a number of environmental variables (Hanson, 1975). Such variables include social class (Bernstein, 1961; Douglas et al, 1968; Fraser, 1958; Hess & Shipman, 1965; Honzik, 1967; Robinson & Rackstraw, 1967), family size and birth order (Rosenberg & Sutton-Smith, 1966; Skorholt et al, 1973), educational level of the parents (Buck, 1973; Hutner, 1972), intactness of the family (Santrock, 1972) and child-rearing practices (Buck, 1973; Walberg & Marjoribanks, 1973).

Increasing interest is being shown in the influence of parent-child interactions and child rearing patterns on cognitive development. Whilst, as with most child development research involving parents, it is the mother/child dyad that has received most attention, there is some evidence that paternal influence has an effect on cognitive functioning. Hurley (1967) found that paternal hostility and lack of acceptance were negatively related to the child's scholastic ability. Katz (1967) measuring boys' perception of their parents found a strong positive association between perceived paternal encouragement and academic achievement in lower SES black elementary school boys.

Shaw and White (1965) found that high achieving boys perceived themselves as more similar to their fathers than did low achieving boys. Heilbrun et al (1967) in an investigation of 123 female undergraduates, measured perceived paternal control and performance on a cognitive task, the Stroop Color-Naming Test. It was found that perceived rejecting tendency of the father was associated with cognitive impairment on the task if the task was complex and socially reinforced. Such impairment, it was suggested, resulted from continuous critical evaluation by the father which affected performance.

Radin (1972, 1973) in two studies mentioned earlier (p.2) investigated the relationship between father child interaction and the intellectual functioning of four year old boys. She found by means of interviewing the fathers, testing the boys and observing the interactions between father and son, that the IQ of the boys was positively correlated with paternal nurturance and negatively correlated with paternal restrictiveness. A later, more complex study by Jordan, Radin and Epstein (1975) elaborated on these results. Their investigation involved both boys and girls all 4 years old from three social class groups. There were 37 middle class boys, 28 middle class girls, 39 working class boys, 32 working class girls and 23 lower SES boys and 21 lower SES girls. A similar method was used to that employed in the earlier studies. A male interviewer talked to the fathers whilst the child was present. Recordings were made of the fathers' verbal responses and the interviewer kept a record of non-verbal behaviour. Children were given the Stanford-Binet Intelligence Scale and a standardised Piagetian Scale within a month of the

interview. On the basis of these tests the two sexes were each divided into three groups, high, medium and low IQ. Results showed a significant positive relationship between IQ and paternal nurturance for Middle Class boys only. No such relationship was found for the other two groups of boys nor for girls. Thus both sex and social class were relevant to results. Another study by Davis and Lange (1973) points to the importance of the mother-father unit, rather than either parent alone in influencing the development of different categorisation styles (i.e. "preferred and consistent ways of organising and processing stimuli") in young children. The development of such styles is, they assert related to the development of intellectual skills.

Thus, evidence exists both for the influence of the father and the mother-father unit in the child's cognitive development. If the present father may be shown to exert some influence, what then may be the relationship between the child's cognitive development and his absence? If such a relationship exists does it vary according to the sex of the child, his social class and the type of absence involved. The present study is concerned with an investigation of these questions.

Research concerned with the relationship between FA and cognitive development differs from that considering absence of the mother. In the latter case most work has been done on children reared in institutions or in other situations in which the child is, in fact absent from both parents. In any case it is rare for a child to be reared by a lone father so it would be difficult to study subjects absent from mothers alone. This is not the case when research

investigating FA is examined. Research investigating cognitive development and maternal absence also differs from research into FA insofar as it appears that work has only been carried out in an attempt to detect deficits in development. As will be demonstrated FA research has not been limited to this area alone.

Research has been carried out in an attempt to establish whether FA is an environmental variable associated with intellectual deficits. Some workers suggest that this is so and indeed Kohlberg (1966) has postulated that where difficulties in sex-role development are experienced in FA children they are due to the lower intelligence of the children. Another area of interest has been the study of sex differences in cognitive abilities exhibited by FA and FP children. In particular studies have examined whether FA boys exhibit a more typically female pattern of cognitive abilities.

Studies investigating whether a relationship exists between FA and cognitive deficits have yielded different, sometimes conflicting results. Two investigations have been carried out that are similar to the present study (Lessing et al, 1970; Maxwell, 1961). Maxwell (1961) studied a group of 291 children aged between 8 years and 13 years who had been referred to a child guidance clinic. He compared performance on the WISC of those children who had experienced FA and those who had not. He found that those children who had experienced FA after the age of five obtained lower scores on Comprehension, Vocabulary, Picture Completion, Picture Arrangement and Coding sub-tests. Maxwell did not provide separate information about males and females in his sample, nor did he examine the influence of social class. Also his use of

children who were child guidance clinic referrals as subjects, raises questions about the applicability of his results to a more general population. Finally Maxwell did not consider whether different types of absence produced different results.

Lessing et al (1970) also studied the performance of FA and FP children on the WISC. They investigated 311 boys and 122 girls aged between 9 years and 15 years 11 months all diagnosed as having behaviour problems. They looked at sex, social class and FA and their association with WISC scores. Absence was defined as two years, not necessarily consecutive with no record being kept of age of onset of first absence.

Results showed that over the whole group boys scored higher than girls on Information, Vocabulary, Picture Completion, Picture Arrangement, Block Design and Object Assembly sub-tests, whilst girls scored higher on Coding. FA children scored lower on Block Design, Object Assembly and Performance IQ. FA boys obtained lower scores than FP boys on Arithmetic and Coding. No significant differences were found between FA and FP girls. Looking at interactions between social class and absence it was found that FA Working Class children obtained lower scores on Information, Similarities, Verbal IQ and Full Scale IQ than did their FP counterparts, whilst FA Middle Class children obtained higher scores than FP Middle Class children on Comprehension, Vocabulary and Verbal IQ.

Lessing et al point out that those results consistent across social class involved quantitative and spatial abilities, usually those in which boys performed better than girls. They consider that the

decrement in scores found may be due either to stress or the absence of the male identificatory model.

In spite of the fact that Lessing et al controlled and examined many variables and therefore attempted to consider the complexities of the situation there are three major criticisms of their study. The first is that they failed to examine different types of absence, the second is that their sample, like Maxwell's was drawn from a population of children already diagnosed as having problems. The third criticism concerns their data analysis. Lessing et al carried out three different sets of 13 analyses of variance on their data, each time arranging it in a different way. Two problems arise here. One is that if more than one analysis is carried out on the same data it is necessary to use a more conservative significance level to prevent an increase in the type I error rate. Lessing et al do not do this, a fact that throws doubt upon their results reported as significant at anything less than the .01 level. The second criticism is that they carried out 13 separate analyses in each of their three arrangements of data, these analyses being on separate sub-tests of the WISC, that is, on correlated data. This would tend to lead to correlated decision errors again raising the type I error rate. If all results significant at a level less than .01 are omitted this leads to the exclusion of all those with FA as a main effect and also those involving FA in interaction with sex of child. Four interactions between social class and FA remain as they were significant at the .01 level. These are those involving Comprehension, Similarities, Vocabulary and Verbal IQ.

Studies using less comprehensive measures of intellectual ability have also been carried out. Santrock (1972) examined the 3rd and 6th grade IQ and achievement scores of 286 FA and 57 FP white boys and girls from lower SES backgrounds. He used the Otis quick scoring IQ and the Stanford Achievement Tests to assess his subjects and his results were analysed examining age of onset of FA and type of absence. Also he examined whether the presence of a step-father was important. He found that FA children obtained lower scores on both measures regardless of the reason for the absence. Secondly he found that scores were lowest in those children who had experienced absence before age 5 years and that FA girls scores were not as low as FA boys.

One study particularly relevant to the present investigation was carried out by Hillenbrand (1971). She investigated 126 children who had experienced FA due to their fathers being in the U.S. Marines. Seventy three males and 53 females were studied. Seventy seven were children of officers and 49 were children of enlisted men. Tests measuring IQ and verbal and quantitative ability demonstrated a relationship between decreased quantitative ability and FA in girls. In boys results differed according to their birth order. For first born boys FA was related to higher quantitative ability and to a reduced difference between verbal and quantitative scores. For later born boys a greater difference was found between verbal and quantitative scores. Hillenbrand also investigated the relationship between IQ and maternal dominance, that is the child's perception of the mother as making relatively more decisions than the father. She found a significant correlation between maternal dominance, high IQ and higher verbal and

quantitative ability. Another study investigating FA in children from military families was carried out by Lee (1974). He examined 40 FA boys from military families and 30 FP boys from civilian families. All were in grades four to six at school and were white from one or two child families. Lee found that FA boys were lower in numerical ability than were FP boys. A difference between the way in which the two groups perceived their fathers was also found. Boys in the FA group reported that their fathers were significantly less loving than did boys in the FP group. Within the FP group it was found that mothers' protective attitudes to their sons was negatively correlated with numerical ability. Such a relationship was not found in the FP group.

Other studies have also found differences in intellectual performance between FA and FP children. Douglas et al (1968) found that FA children over the age of 8 years at assessment had fallen behind in school performance compared to FP children. They reported that the older were the children the greater was the decrement and that results for boys were more marked than those for girls. However they had no control for length or type of absence, nor age of onset, nor was it possible to assess the quality of the father child relationship before the absence occurred. Blanchard and Biller (1971) also studied school performance. They studied 44 white third grade boys divided into four groups. These were a group who had experienced FA before age 5 years, a group who experienced FA after age 5 years, a group whose father was present but not very available and finally a high availability FP group. Children's grade level and their performance on the Stanford Achievement Test were assessed. Blanchard and Biller reported that both

FA groups obtained lower grade scores and lower scores on the test than did the FP groups. However again there was no control for type of absence.

Some studies exist which report no differences between FA and FP children. Risen (1939) examined the school records of 235 FP junior high school students and 235 who were absent from one or both parents. Of the latter 62% were FA. He looked at IQ, grade level and incidence of referral to the school counsellor. He found no differences between the two groups in their IQ scores but the parental absence group obtained lower scores on measures of cooperation and they more often received attention from the school counsellor. Rutter, Tizard and Whitmore (1970), in their investigation of all children aged between 9 and 11 years living on the Isle of Wight, found no relationship between FA and intellectual or educational retardation as assessed by the WISC and the Neale Analysis of Reading Ability. Three studies of lower SES children also reported no differences. Newstat (1973) reported no differences between FA and FP children in geometric problem solving and neither Solomon et al (1972) nor Wasserman (1972) could find any differences between FA and FP lower SES black children in school achievement.

Thus the findings concerning the association between FA and cognitive deficits are inconclusive. Some studies report results that suggest absence is associated with deficits and some do not. In those studies that do report differences girls are considered less affected than boys (Hillenbrand, 1971; Santrock, 1972). One study (Lessing et al, 1970) reported a significant interaction between absence and

social class. Significant results have been reported from investigations of permanent and temporary absence. The present study is concerned with an attempt to assess the influence of FA on cognitive abilities considering these three variables, sex, class and type of absence.

Returning to the second area of interest mentioned earlier in this section, that is, whether FA boys and girls obtain different patterns of scores from FP boys and girls on cognitive tasks, several studies have attempted to investigate this.

There is much evidence to suggest that, in the general population there are differing patterns of abilities in boys and girls. For a very comprehensive coverage of the literature see Maccoby and Jacklin (1974). It is found that girls score higher on test of verbal fluency, language usage and reading, particularly after age 11. Also it has been found that boys do better than girls on tasks involving visual-spatial ability and mathematical ability, although in both cases the difference is not consistent until adolescence (Maccoby & Jacklin, 1974). Analytical ability has been seen as an area in which males perform better than females (Biller, 1974). However, having reviewed all the available evidence Maccoby and Jacklin suggest that differences, when they do appear are due to the nature of the tasks used to measure analytical ability. Differences between the sexes are most often found when the tests used are said to measure field dependence/independence by means of a visual task. Examples of such tasks are the Rod and Frame Test and the Embedded Figures Test. Maccoby and Jacklin assert that, in these cases what is being measured is visual-spatial ability and that

differences found are due to males' superiority in this rather than in analytical reasoning. In support of this they quote studies which have measured analytical reasoning without using tests that have such a strong visual component in which no differences have been found between males and females.

Research into FA and cognitive styles may, for the purpose of review be divided into two parts. There are firstly studies of field dependence/independence and secondly the investigation of other cognitive abilities. Interest in the concept of field dependence/ independence emanated originally from the Gestalt School of Psychology. It refers to the individual's ability to make judgements about a stimulus independent of its surroundings. Much research has been carried out to investigate the concept and to attempt to correlate it with other personality factors. However such research goes beyond the scope of this review. It is the intention here to assume, with Maccoby and Jacklin (1974) that those tests of field dependence/ independence with a high visual component yield differences between males and females because of differences in visual spatial ability. Research projects investigating FA and this concept have, almost without exception used the visual tasks referred to above. The concern in this section is to examine whether results have demonstrated that FA is associated with a change in the usual pattern that males do better on such tasks than females.

Sherman and Smith (1967) compared 13 male and seven female orphans with 12 males and seven females reared in a normal family setting. They discovered that in the control group the females were more field

dependent than the males, whilst in the orphaned group the reverse was true. Sherman and Smith see differences in field dependency due to factors associated with identification. They consider that female field dependency is brought about because of identification with the mother and male field independence by identification with the father. They suggest that in the absence of the parents this pattern breaks down. However, if differences found are due to differences in visual spatial ability this explanation is not satisfactory. Louden (1973) in an unpublished doctoral dissertation reported by Biller (1974) obtained rather different results. He reported that amongst male and female college students, those of both sexes who had experienced FA were more field dependent than FP students. Another paper by Wohlford and Liberman also reported in Biller (1974) suggested a similar pattern for younger children. They studied 72 Cuban school children divided into three groups. The groups were those who had experienced FA before age 6 those who had experienced it after age 6 and those who had not experienced FA. They reported that the group experiencing absence later were more field dependent. Finally a study by Barclay and Cusumano (1967) examined boys only. They studied 40 male adolescents, half white and half who were black. Within each racial group half the boys were classified as FA. They measured performance on the Rod and Frame Test and found that for both white boys and black boys those in the FA groups were significantly more field dependent.

Thus there seems to be some agreement that FA children obtain different scores to FP children on tests of field dependence with a high visual spatial component. However, it is not clear whether such

differences indicate problems in identification (Sherman & Smith, 1967), lower levels of analytical ability or differences in visual spatial ability. If, as has been suggested, the last explanation is accepted we may conclude that FA in boys is associated with a decrement in an ability which they usually possess to a greater degree than do girls. For girls it is not clear whether FA results in an increase or decrease in ability. It would be of interest to establish what pattern emerges when results of measures specifically designed to investigate visual spatial ability are examined.

The final group of studies that will be examined are those that consider the relative verbal and quantitative abilities of those who have experienced FA. Of the six studies to be examined four used college students as subjects. Difficulties arise with studies that attempt to relate differences in adults with their past experiences. The same characteristic could be present in two adults as a result of totally different past experiences.

Altus (1958) compared 25 male college students from broken homes with 25 students from intact homes. He found that in the broken home group verbal scores on the ACE, a college aptitude test were higher than quantitative, whilst in the FP group the reverse was the case. Altus reports that in the experimental group verbal scores were higher rather than quantitative scores lower. Carlsmith (1964) in a similar study investigated a group of male college students and also a group of male and female high school students and their performance on the Scholastic Aptitude Test (SAT). For the college student study he selected 40 subjects from a group of 1180 students. Twenty had

experienced FA of at least two years which began before the boy was 6 months old. These were compared with a group of 20 who were matched for father's occupation and education, parent's marital status and boys' previous academic record and who had not been absent from their fathers. Carlsmith found that if the pattern of scores on the SAT was examined then the FA group were found to be superior in verbal ability compared to quantitative. This was the reverse of the usual pattern found for males. Similar results were found for male high school students who were absent from their fathers at an early age. However when the results of a group of males absent from their fathers later and for shorter periods were examined it was found that they obtained even higher quantitative scores than the FP group and that these were higher than their verbal scores. For girls it was found that FA was associated with increased verbal ability.

Nelson and Maccoby (1966) obtained similar results in their investigation of college males. Verbal scores were relatively higher than quantitative in the FA group. Finally Landy, Rosenberg and Sutton Smith (1969) in their study of college women who had experienced intermittent absence from their fathers reported that they obtained lower quantitative scores than did a control group.

Two studies of younger children which examine patterns of abilities exist and these have already been referred to (Hillenbrand, 1971; Lessing et al, 1970). Lessing et al reported that FA boys obtained lower scores on arithmetic and coding sub-tests, the latter having a high visual-spatial component. However, the validity of these results has already been questioned as the significance level

of .05 was not sufficiently conservative given the data analysis employed. Hillenbrand (1971) in her study of children from military families found that first born FA boys obtained higher quantitative scores compared to FP and later born boys.

It is apparent that more work needs to be done to examine whether FA has an influence on abilities that are present to different degrees in boys and girls. The present study is concerned with assessing WISC performance of children experiencing permanent, intermittent and no absence from the father. Sex and social class will also be examined. In this way it is the intention to look for different patterns in scores in an attempt to remove some of the question marks from earlier results.

3. Research investigating personal adjustment

The third section of this review has been given the heading research investigating personal adjustment. It is intended, by the use of such a general term, to enable the inclusion of research concerned with a number of different aspects of child development. Aspects to be considered include personality and emotional development as well as the development of different patterns of behaviour. Such a review is relevant to the present study, for, in addition to the investigation of intellectual performance, the incidence of emotional and behavioural problems in FA children will also be considered.

Research investigating the association between maternal absence and the incidence of emotional and behavioural problems has been examined briefly in an earlier section (see p. 9). It is necessary to restate

here a point that has been made before. That is that many of the studies of children absent from their mothers were, in fact, absent from both parents, for example in the case of those children reared in institutions, children were absent from fathers as well as mothers.

The assumption that has been made by many is that the mother is the major and almost exclusively important figure for the child. However, research that considers the relevance of the father and his absence to the personal adjustment of the child does exist and will be considered here.

In the present study sex of the child, social class and type of absence, whether permanent or temporary and intermittent are considered to be important variables and an examination of the literature tends to support this view.

a) Studies investigating the association between FA, moral development, antisocial behaviour and delinquency

A major area of interest has been the association between FA, moral development, anti-social behaviour and delinquency. All three are related so that inspite of the fact that our study is concerned with children younger than those normally exhibiting delinquent behaviour, all three aspects will be reviewed.

Firstly, studies of moral development, or the extent of internalisation of society's values, will be examined. A number of theories of child development consider the father to be an important figure in the child's socialisation and acquisition of moral values. Santrock (1975) reviewing these theories states that in spite of their different formulations theories based on power, defensive and

anaclitic identification are consistent in their emphasis on the importance of the father as transmitter of morality. Consequently FA is seen as a potential cause of problems in moral development.

There are two types of study examining FA and moral development. One type looks at the ability of the child to delay gratification or satisfaction of an impulse and the other looks at moral behaviour and moral development more generally. Those who have studied the association between FA and the ability to delay gratification consider that the latter is an indicator of adjustment. Mischel (1961) says that the inability to delay gratification is associated with immature, neurotic and criminal behaviour. He carried out an investigation of groups of Trinidadian and Grenadian boys and girls aged between 8 and 9 years, and 11 and 14 years of age. He examined whether FA was associated with the selection of a small immediate reward rather than a larger one to be received a week later. Mischel found this to be the case in the younger group but not the older.

Santrock and Wohlford (1970) studied the ability to delay gratification amongst fifth grade American boys. They had three groups of subjects, with 15 boys in each group. One group had experienced FA due to the death of the father, one group had experienced absence because of parental divorce and one group had experienced no absence. Subjects were matched for age, SES and grade level. Results differed according to group. Santrock and Wohlford found an association between opting for immediate reward and FA because of parental divorce, but no association in the group whose fathers were dead. The time of absence seemed relevant, the association being more marked if absence occurred before the boy was 2 or after he was 6 years of age.

Thus differences have been found between FA and FP children in their decision to opt for delayed or immediate gratification and this seems to be influenced by age of onset of absence as well as the reason for that absence.

Hoffman (1971) carried out a more general study of FA and its association with moral development. He suggests that the father is important here, firstly because he is one of the two most important socialising agents and secondly because it is he, rather than the mother, who is the transmitter of society's norms and values. Hoffman's study was of 25 FA boys and 28 FA girls and a control group, all matched for age, sex and social class. Using information from the children and their teachers he found no significant differences between FA and FP girls, but that FA boys obtained lower scores on all his measures of moral development. These measures were of guilt, assessed by means of a semi-projective story completion technique, internal moral judgement assessed by asking the subjects to judge hypothetical moral transgressions, acceptance of blame and conformity to rules and consideration of others both assessed by teachers reports. FA boys were also rated by their teachers as exhibiting higher overt aggression.

Conflicting results were obtained by Mumbauer and Gray (1970). Unlike Hoffman they employed direct measures of behaviour in a laboratory task. They found no differences between FA and FP boys in their ability to resist temptation.

One study by Santrock (1975) used both indirect measures and direct behavioural observation and found that different results were

obtained depending on the type of assessment used. He studied 120 lower SES boys, all pre-adolescents, 60 FA and 60 FP. The FA groups were divided into three, 20 subjects whose parents divorced before the boys were 6 , 20 whose parents divorced when the boys were aged between 6 and 10 years. Santrock controlled for age, social class, family size and presence of an older male sibling. Results demonstrated few differences between FA and FP boys on self report or direct observation measures. Teachers reports indicated that FA boys were less advanced in moral development and their reports also indicated more social deviance. Sons of divorced women showed more social deviance according to teachers, but were more advanced in moral judgements than were sons of widows. Age of onset of absence was not a significant factor. Santrock discusses the finding that teacher reports are the only measures that yield significant differences and puts forward two possibilities. These are firstly that behavioural measures in the laboratory provide information only about a finely specified situation, whereas teacher ratings are more global and based on long term contact therefore more accurate. The second possibility is that teacher reports may be biassed so that one group may be assessed differently from another.

The present study uses reports both from parents and teachers as a source of information about the children as it is felt that in spite of the possibility of bias, parents attempting to present their children in the best possible light and teachers being overly negative about a disruptive child, much useful data may be obtained from those spending a great deal of time with the children.

It will be argued in this thesis that it is misleading to attempt to examine FA without considering the influence of other variables, in particular type of absence, social class and sex of child. Support is provided for this argument in the results of the studies described above. For example, the studies by Santrock and Wohlford (1970) and Santrock (1975) report different results depending on whether absence was due to divorce or death of the father. There are, however, no studies investigating the moral development of children experiencing intermittent absence. One study by Hoffman (1971) found that his results differed according to the sex of subjects, significant differences being demonstrated in boys but not girls. None of the studies examined social class. However social class is a variable that has been investigated in other studies to be considered in this section.

An examination of the literature investigating aggression, antisocial behaviour and delinquency provides further support for the need to examine intervening variables.

Results of studies of the association between FA and aggression vary with the sex and social class of the subjects. The findings relating to the association between FA and aggression have been discussed in an earlier section (p.42) and so will only be referred to briefly here. None of the studies already discussed found differences in levels of aggression in FA and FP girls. Studies of FA boys have demonstrated some significant differences, although the direction of these differences differs from study to study. Studies of younger, predominantly middle class boys aged between 3 and 10 years, and

employing doll-play techniques and parental reports found that FA boys obtained lower ratings of aggression than did FP boys (Bach, 1946; Sears, 1951; P. S. Sears et al., 1964; Stolz, 1954). Studies of older, predominantly lower SES boys have found higher levels of aggression amongst FA boys compared to FP (Hetherington, 1966; Hoffman, 1971; McCord, McCord, & Thurber, 1962; Santrock & Wohlford, 1970). Santrock and Wohlford also found that type of absence influenced results, boys from homes in which the parents divorced having higher levels of aggression than boys from homes in which the father had died or in which he was present.

Another study (Smith & Connolly, 1972) employed direct measures of behaviour and examined 40 children, whose mean age was 3 years and 9 months, in a nursery school setting. Both middle class and working class children were included in their sample. Approximately half the children in their sample were being reared by mothers who were unmarried, separated or divorced. Significantly more aggressive behaviours were observed in boys without fathers compared to boys with fathers and girls. No information was provided about the social class distribution in the FA group. However, unmarried mothers were placed in the lowest SES category. It is therefore possible that there were more children classified as working class in the FA group. Another investigation which attempted direct measurement of aggressive behaviour (Keller & Murray, 1973) demonstrated no differences between 6 year old FA and FP negro boys in their tendency to play aggressively after being mildly frustrated and being shown aggressive films.

Thus differences in levels of aggression exhibited by FA and FP boys have been found varying as a function of social class and type of absence. However, it is not possible to accept these results without reservation. There is little evidence that indirect measures of aggression such as projective techniques or self report inventories correlate with the incidence of aggressive behaviour in everyday life. Reports of aggressiveness by teachers may be biassed. The two studies employing direct measures of aggressive behaviour (Keller & Murray, 1973 and Smith & Connolly, 1972) produced conflicting results. However, whilst both employed direct observation of aggressive behaviour, the subjects studied were different. Also, Smith and Connolly examined behaviour in a situation to which their subjects were accustomed. The procedure employed by Keller and Murray was novel to the children and carried out in an unfamiliar setting.

The third group of studies to be considered in this section are those investigating delinquency and anti-social behaviour. There are two major approaches to the study of delinquency, one predominantly sociological, the other psychological. The sociological approach is concerned with the incidence of delinquency in different social groups. The psychological approach is more concerned with the development of delinquency in the individual. Neither approach alone is enough. It may be possible to provide a theoretical explanation of why a particular ethnic or social group has a higher incidence of delinquency than another, but it is still necessary to consider why, within that group one adolescent becomes delinquent and another does not. Studies of the association between FA and delinquency are predominantly psychological.

Crime statistics indicate that the proportion of delinquents is higher in lower SES groups (Douglas, 1970; Herzog & Sudia, 1970). It is the case that adolescents in certain groups, for example those in ethnic minorities and those from poorer neighbourhoods are more likely to be arrested and convicted. However, even given this bias, the evidence supports the view that the incidence of delinquency is higher in the lower SES groups. Thus any study attempting to investigate the association between FA and delinquency needs to ensure that the FA and FP groups are matched for social class. However, adequate control of this variable is difficult to achieve.

The major problem that arises in the attempt to control for SES is the difficulty of obtaining the cooperation of a truly matching control group. Information about delinquents and their families may be obtained from official records. Control groups must first be persuaded to cooperate and then to provide accurate information. This problem becomes particularly apparent when attempts are made to enlist the help of severely disadvantaged families, for these are the least willing of all to take part in research projects. Thus the researcher may be forced to use controls from a less disadvantaged environment, not exactly matching the delinquent group. Herzog and Sudia (1970) point out that within a broad SES classification like 'working class' or 'middle class' there are differences. One parent families tend to be at the least prosperous end of a classification and this needs to be taken into account when obtaining matching controls.

As most delinquents come from lower SES homes few studies exist that have examined social class as a variable and how it affects the

association between FA and delinquency. Those that have examined social class have been those that have studied large groups of children and examined the incidence of delinquency within their sample. Douglas (1970) in a longitudinal study of 5362 children found that delinquency in boys was associated with broken homes, particularly if the cause of the break was divorce or separation and if the break-up occurred before the boys were 6 years old. Douglas found that whilst delinquency was more common in the working class group than in the middle class group, in the case of the middle class sample where the home was broken, delinquency was four times as likely to occur compared to unbroken homes, in the working class sample it was only twice as likely. In the majority of cases where the home was broken, the child remained with the mother. Gregory (1965) examined information about 11,329 ninth grade school children and found that, whatever the SES of the boys delinquency rates were higher amongst those absent from their fathers. In common with other studies (Andry, 1960; Glueck & Glueck, 1950) he found that absence of the mother was not significantly related to a higher rate of delinquency.

Examining type of absence as a variable it is found that many studies point to the existence of an association between absence due to divorce or separation and delinquency. Studies by Douglas (1970) and Gregory (1965) have already been reported. Another study by Gibson (1969), a longitudinal one of 411 working class boys, found that desertion by the father was most strongly associated with delinquency in those families without other major social handicaps such as poor housing. McCord, McCord and Thurber (1962) reported

that FA due to divorce or separation was associated with higher rates of delinquency, particularly if absence occurred after the boy was 6 years old. Studies by Tuckman and Regan (1966), Russell (1957) and Wardle (1961) reported a higher incidence of anti-social behaviour such as lying and stealing amongst children from broken homes. Similar results have been reported by a number of other researchers (Anderson, 1968; Bruce, 1970; Gibson, 1969; Glueck & Glueck, 1950; Monahan, 1957). However, a problem occurs in the interpretation of the findings of these studies. Rutter (1971) points out that an association between a broken home, absence of the father and delinquency does not indicate whether the crucial factor is the break and absence or the disruption preceding the break. It is possible that family discord before the break occurs is more crucial.

Studies exist that demonstrate that even when the home is not broken, parental discord is associated with anti-social behaviour (Craig & Glick, 1965; McCord & McCord, 1959; Tait & Hodges, 1962). Both McCord and McCord (1959) and Rutter (1971) found that delinquency rates in unhappy unbroken homes were higher than in stable broken ones. Further evidence is provided by the study of McCord, McCord and Thurber (1962) who found that the later the break occurred, the more likely was it to be associated with delinquency. A similar finding is reported by Anderson (1968) who compared 58 negro and 58 white boys admitted to the U.S. National Training School, with a control group. He found that absence of the father after age 4 years was more common in the training school group than in the controls, and particularly if absence occurred after the boys were 12 years

old. Hersov (1960) found that father absence after age 5 was associated with higher rates of truancy than was found in those who had not experienced such absence. A possible explanation for this might be that the older the boy at the time of the break the longer the father has been present in the home as a source of conflict. It may be the pre-separation conflict that is the more important factor. Contradictory results have been reported by Douglas (1970) and Grygier et al (1969). In both studies it was found to be absence before age 5 that was most important.

However, further support may be found for the view that conflict preceding the break, rather than absence, is most important from studies of the father-son relationship. Grygier et al (1969) using behavioural measures, case histories and personality tests, found that for delinquent boys a faulty image of the father was as important as his absence. By fault image Grygier et al meant an image of the father as ineffective and passive. Bruce (1970) found that delinquent boys were more likely to report tension between themselves and their fathers than were a control group, although the tension may have resulted from the delinquency rather than preceding it. Finally Andry (1960) reported that delinquent boys were more likely to view their fathers as cold and distant and less loving than were non-delinquent boys.

Although absence due to divorce or separation has been most often associated with delinquency and anti-social behaviour there are findings that indicate that other types of absence may also be important. Gregory (1965), whilst stating that the incidence of delinquency in boys

from broken homes was higher than in boys whose fathers were dead, nevertheless, the incidence in the latter case was higher than in boys from intact homes. Little (1965) found that of 500 Borstal inmates admitted in 1958, 214 had experienced FA and of these 99 had also experienced absence of the mother. The most common reason for FA was War service. However, Little did not compare his group with any controls so it is impossible to say whether this pattern was any different from absence in the general population. One piece of research reporting findings contradictory to this was carried out by Tuckman and Regan (1966). They investigated 1767 children diagnosed as having behaviour problems and found that for boys a higher incidence of anti-social behaviour was found in those from homes broken by divorce or separation. A higher incidence of anti-social behaviour was not found in boys whose fathers had died.

It has been suggested that the extent of the association between broken homes and delinquency has been overestimated as it is possible that children from broken homes are more likely to be brought to court and if tried, convicted than are children from intact homes (Cicourel, 1968; Shaw & McKay, 1932; Tappan, 1949). It has also been asserted that, in America at least, black adolescents are more vulnerable to arrest and conviction, and the proportion of broken homes is higher in this group.

Turning now to sex differences in results, it is the case that the number of studies that investigate the association between FA and delinquency in girls is small, as also is the proportion of female delinquents to male. Studies that have reported results for females

in most cases have found associations between FA and delinquency and anti-social behaviour in females. One study investigating females only (Koller, 1971) reported that, compared to non-delinquents, female delinquents were more likely to have experienced FA. Also, compared to the general population the reason for the absence was more often divorce. Hersov (1960) reported that females from homes in which fathers were absent were more likely to truant than were females from intact homes. Both Russell (1957) and Tuckman and Regan (1966) reported that children from broken homes were more likely to exhibit antisocial behaviour and they included both males and females in their sample. However, without analysis of results separately by sex it is not possible to say to what extent these results referred to males and to what extent females. Douglas (1970) reported a higher rate of illegitimate births amongst girls from homes broken by divorce or separation. Contradictory results are reported in connection with the importance of age of onset of absence. Douglas (1970) suggests absence before age five is critical, whilst Hersov says that absence after age five is most important.

Two studies those of Gregory (1965) and Grygier et al (1969) obtained different results from those mentioned above. Gregory found that absence of the mother was most likely to be associated with anti-social behaviour in girls, the incidence being highest when homes were broken by divorce or separation and the girls remained with their fathers. Grygier et al (1969) could find no association between the incidence of delinquency and FA in girls.

In any discussion of female delinquency it should be stated that the reasons for females being brought to the attention of the courts tend to be different from those for males. For example in Koller's (1971) study 44% of her delinquent females were admitted to a training school for being 'exposed to moral danger', 39% for being 'uncontrollable', a smaller percentage for being pregnant and only 12% for stealing. Male delinquency seems to be centered much more on antisocial acts such as stealing and violence. Therefore results for males and females are not directly comparable when using delinquency as a characteristic of subjects.

Some findings relating to home environment have already been discussed. These are existence of conflict in the home and the nature of the father-child relationship. Studies have been carried out to examine other variables. For example Hersov (1960) (see p.74) reported that truancy was not only associated with absence of the father but also with lack of consistent parental discipline. Herzog and Sudia (1970) point to the importance of the child's relationship with the mother and the amount of supervision given by her. They quote the study by Glueck and Glueck (1962) in which it was found that 95% of the delinquent group compared to 34% of the control group were found to have been exposed to 'unsuitable discipline' from their mothers. Also 64% of the delinquent group compared to 13% of controls were not considered to be adequately supervised by their mothers. Another study by Toby (1957) also points to the importance of lack of supervision of the child. It is possible that environmental factors such as these, which themselves may be associated with the absence of the father may be more important than father absence itself.

The present study is concerned, in part with an examination of the existence of anti-social behaviour in children, both male and female, from two different SES groups experiencing permanent, intermittent and no absence of the father. It will be of interest to examine whether the incidence of such behaviour differs according to the type of absence. Different types of absence will affect the child's environment in different ways and such a finding would lend support to the view that it is not absence, but rather the circumstance surrounding the absence that are important.

b) Other research investigating personal adjustment

Throughout this review the attempt has been made to classify studies of FA according to the aspect of child development with which they are concerned. However, when the studies to be included in this final section are examined it is apparent that to attempt such a classification here would be impossible. The reason for this is that few investigations have considered the same types of behavioural and emotional problems, and even those that are, ostensibly examining the same problem use different means of assessment, thus raising doubts about their comparability. Therefore studies will be classified in terms of the variables of interest in the present investigation. Differences in the incidence of behavioural and emotional problems will be examined in terms of differences in type of absence, sex of child and social class. Few studies exist that specifically look at sex differences and none could be found that considered social class as variable although some did control for this factor.

Firstly studies examining different types of FA will be considered. Emphasis will be on those examining permanent absence due to parental divorce or separation and those examining temporary absence arising because of the father's occupation, in particular temporary absence occurring as a result of military occupations.

When considering those studies that have investigated FA due to parental divorce it is important to remember the point made earlier when findings about delinquency and anti-social behaviour were discussed. That is that divorce of the parents does not simply mean absence of one of those parents, usually the father, to the child. Events preceding the divorce, for example marital conflict may have exerted considerable influence on the child, and indeed may be more significant determinants of problems than the absence that follows. In fact absence of one of the parties may result in a more stable environment for the child. Thus, to attribute differences in the incidence of problems between children from intact homes and those from homes in which the parents are divorced to absence per se is to simplify the situation.

Examining research other than that investigating antisocial behaviour and delinquency we find that divorce is associated with a higher incidence of emotional and behavioural problems. Some studies have looked at children from broken homes without considering FA specifically and differences between them and children from intact homes have been reported.

A study by Koch (1961) examined 22 children, 11 from homes broken by divorce, eight boys and three girls, and 11 from intact homes, seven boys and four girls. The children were matched for intelligence and chronological age, the mean age being 57.4 months. Koch found that the experimental group exhibited greater anxiety in their responses to projective tests. No differences were found between the two groups in the incidence of problems of eating, sleeping, toileting, excess fears, nor home harmony. That is, no differences were found in reported behaviour, only in responses to a projective test. Without evidence that such differences in responses are associated with manifestations of difficulties outside the testing situation, they associated with manifestations of difficulties outside the testing situation, they cannot be considered to be of much relevance. Caplan and Douglas (1969) compared 71 children, 41 males and 30 females aged between 5 and 16 years (mean age 11.5) diagnosed as depressive, with another group of 135 males and 50 females in the same age group (mean age 10.6) diagnosed as having other types of problems. Case histories were examined to determine the incidence of parental loss in the two groups. They found a significantly higher incidence of parental loss of six months or more before the children were 8 years old in the depressed group. The sex of the parent lost was not a significant factor, but the highest incidence was in the group who has been placed in a foster home for at least six months after

the loss. This finding seems to suggest that it is not absence itself of either parent that is most significant, but that the greater the general disruption to the child's life the greater was the incidence of depression.

A further study by McDermott (1968) examined the immediate effects of divorce on 16 nursery school children aged between 3 and 5 years. The study was limited as there was no control group, the number of children was small and little information about the family was obtained. However, the findings are of interest because they seem to indicate that a large proportion of children experiencing such disruption are disturbed by it at the time. Ten of the 16 demonstrated acute behaviour changes and in another three some difficulty was experienced. As many children are brought up successfully with no apparent long term effects after divorce, it would appear that they recover from these setbacks. Therefore it is important to examine not just immediate effects of disruption, but also long term effects. Unfortunately McDermott did not carry out any follow-up studies. Burchinal (1964) found no differences in personality characteristics between male and female adolescents from broken and intact homes and both Rutter, Graham and Yule (1970) and Rutter, Tizard and Whitmore (1970) could find no association between a broken home and childhood neurosis.

Thus whilst studies of children from homes broken by divorce have pointed to an association between such a disruption and the incidence of antisocial disorders, the association with other types of problem is much less clearly marked.

Turning now to these studies that have concerned themselves more specifically with absence of the father a similar picture emerges. When differences between those groups experiencing FA due to divorce and those whose fathers are present do appear they are again not very marked. For example Hetherington (1972) carried out a complex study of three groups of lower SES and lower middle class girls aged between 13 years and 17 years. The three groups were made up of girls with fathers present in the home, girls whose fathers were absent because of divorce and girls whose fathers were dead. Hetherington measured a number of things including aspects of the girls' personality and adjustment. No differences were found between the three groups on these measures which included measures of anxiety and internal-external control. Hersov (1960) whilst reporting differences between FA and FP children in the incidence of truancy (see p.74) considered to be anti-social behaviour, found no differences between the two groups in the incidence of school refusal, considered to be a manifestation of neurosis. Another study, Steinberg (1974) investigated 320 FP and 90 FA aged either 10 years or 14 years. Subjects were equally divided by age, sex, race (black and white). No significant relationships were found between FA and measures of aggression, anxiety and inter-personal relationships.

Two studies that did report differences between FA and FP children were of children from low SES families. Hartnagel (1970) compared the self concepts of FA and FP white and black low SES adolescent boys. Self conception was measured using the semantic differential. Subjects were asked to describe themselves as they were

and as they should be in terms of pairs of adjectives (eg. good/bad) using a seven point scale. Differences were found between the groups and there was an interaction between race and father availability. Discrepancies between actual and normative self-concept on a factor described as self-potency were significantly higher in white FA groups compared to black FA. However, no differences were found due to absence as a main effect nor race as a main effect. Self potency is described as a factor concerned with perception of oneself as powerful, strong etc. Discrepancies between what subjects perceive themselves to be and what they ought to be are seen by Hartnagel as indicative of an adjustment problem. However, without a significant finding of absence as a main or interaction effect it is difficult to identify how FA is related to this.

Finally, a study by Lecorgne and Laosa (1976) of children from low income Mexican-American families reported that FA boys obtained lower scores than FP children and FA girls on a teacher rating of personal adjustment. FA boys were seen as exhibiting more social and emotional maladjustment.

Some studies point to the importance of variables other than absence, which would provide support for the point made earlier, that absence alone is not crucial. For example Russell (1957) found that the incidence of behaviour problems was higher when there was a step-father in the home and Wylie and Delgado (1959) in a clinical study of 20 FA boys point to the importance of the mother-child relationship. Mothers in their group were found to be uncooperative in treatment programmes for their disturbed sons and treated the sons

like their former husbands in terms of their dependency on them and the hostility they showed them.

Thus an examination of the research investigating the association between FA due to divorce and problems of adjustment other than those labelled anti-social reveals no marked relationship between absence and such problems.

If we now turn to studies of children experiencing intermittent absence due to the father's occupation, again the importance of intervening variables other than the absence itself is apparent. Some of these studies have already been referred to so will only be mentioned briefly here. Stolz (1954) reported that the FA children in her study exhibited more fears and anxiety than did the FP group. Also the FA group demonstrated poorer peer relationships, a finding also reported by Tiller (1958). Stolz considers, however that it is problems with the father, now returned to the home, and his relationship with the children that is most significant here, rather than his absence.

In studies of British children of naval personnel Matthews (1969 and personal communication, 1972) reported that naval children exhibited higher rates of attention seeking behaviour, inattentiveness at school and unhappiness and depression than did non-naval children. The incidence of bed-wetting, however was lower in the naval group. Matthews emphasises the difficulties surrounding the absence that have to be coped with rather than the absence per se. These difficulties are due to problems associated with mobility, such as housing problems, problems of integration into new neighbourhoods, and problems

associated with frequent changes of school. Also difficulties arise because of the effect of separation on the mother. Matthews reports that the mothers of naval children were more depressed and found coping with life more difficult than did the mothers of non-naval children.

Gabower (1960) examined a group of naval children, eight boys and seven girls between the ages of 3 years and 17 years who had been referred to a psychiatric hospital because of behaviour problems. These children were compared to a control group of naval children matched for age and sex, but manifesting no serious problem. She examined differences between the two groups and found that parents in the problem group were less active in assisting their children with coping with the mobility and the problems it entailed. Also that parents in the problem group used infrequent but severe physical punishment but that those in the control group did not. Finally the problem families had poorer physical health, exhibited inadequate management of money, more conflict between parents in their dealing with the children and more general conflicts than did parents in the control group.

A similar study by Pedersen (1966) compared 30 male military dependents aged between 11 and 15 years who had been referred to an outpatient psychiatric clinic for a variety of emotional and behavioural problems with a control group of 30 males matched for fathers' occupation, SES, sibling position and maternal and paternal age who had not been referred to a clinic. The boys were all assessed using a self-report scale, Rogers' Test of Personality Adjustment.

Parents of the boys were assessed using the MMPI. Results indicated that there was no difference between the two groups in the extent of father absence. Positive correlations were obtained between length of father absence and maladjustment score on the personality scale in the disturbed group. Negative correlations were obtained between scores on the scale and length of absence in the control group. Examination of the MMPI scores obtained by the parents indicated that mothers of the boys in the disturbed group were themselves more disturbed, as demonstrated by their scores on the inventory, than were mothers of boys in the control group. No significant difference was found between the MMPI scores obtained by fathers in the two groups. Pedersen suggested that the relationship between the length of father absence and maladjustment score found in the disturbed group might be explained by the fact that if the father is at home he can act as a buffer between the child and a disturbed mother.

Thus it appears that whether FA be permanent or intermittent, no strong association between such absence and problems of adjustment may be identified. When such an association does appear, the importance of other variables accompanying the absence must be considered.

Few studies examine sex differences and FA in the incidence of problems of adjustment. This is the case in spite of the fact that studies of FA concerned with other aspects of development have indicated that boys are more affected by absence than are females. Studies that examine sex differences do report similar results (Hersov, 1960; LeCorgne & Laosa, 1976; Stolz, 1954). That is boys are more affected by FA than are females.

No studies examining social class as a variable in the attempt to detect associations between FA and factors of adjustment other than antisocial disorders and delinquency could be found. This, in spite of the finding that class differences do appear in studies of delinquency and antisocial behaviour as well as in other areas of child development. Most studies match subjects for SES rather than examine it separately (Caplan & Douglas, 1969; Hartnagel, 1970; Hetherington, 1972; Pedersen, 1966; Steinberg, 1974; Stolz, 1954). Others do not take social class into consideration at all (Gabower, 1960; Koch, 1961; McDermott, 1968; Russell, 1957; Trunnell, 1968; Wylie & Delgado, 1959).

It has been stated many times in this review that, regardless of the aspect of development that is studied, there has been inadequate control and examination of important variables and lack of agreement in results obtained. To some extent, indeed the latter may be a direct result of the former.

Increasingly the inadequacy of attempting to isolate one variable in a child's environment as the cause of a specific outcome is being recognised (Clarke & Clarke, 1976; Rutter, 1972). The study that will be described in the pages that follow is designed to examine FA attempting to take account of the influence of three other important variables, type of absence, sex of child and social class. In addition two other variables that may affect results, duration of father absence and family size will be controlled. The question to be asked is whether, given the controls employed in this study, father absence will be found to be associated with deficits in cognitive abilities and problems in personal adjustment.

CHAPTER TWO

AN INVESTIGATION OF THE EFFECTS OF FATHER ABSENCE ON THE COGNITIVE DEVELOPMENT AND INCIDENCE OF EMOTIONAL AND BEHAVIOURAL PROBLEMS IN CHILDREN AGED BETWEEN FIVE AND SEVEN YEARS

INTRODUCTION

An investigation was carried out to examine the cognitive development and incidence of emotional and behavioural problems in children experiencing two types of father absence, permanent and intermittent. These children were compared with a group of children who had never experienced father absence. Children experiencing permanent father absence were drawn from families in which the parents were divorced and children experiencing intermittent absence were drawn from families in which the father was a serving member of the Royal Navy.

Different types of absence have different meanings for the child. Absence as a result of divorce is a qualitatively different experience from absence due to the father's occupation. Marriages that end in divorce are most often characterised by discord and unhappiness before the actual break-up occurs. A child of such a marriage may experience stresses and strains associated with this discord before the father is absent (Rutter, 1971). After the divorce the child may be used as a weapon in the continuing conflict between the parents. Even if the child is not used in this way, absence of the father from the home is

permanent and contact with him is transitory, a factor that might lead to problems in the father-child relationship.

When absence is due to the occupation of the father the situation for the child is different. Although separation may cause difficulties between the husband and the wife, and may be distressing for the child (Matthews, 1969) the father is, in most cases still considered to be a member of the household. With money from the husband coming into the home the wife does not have the financial problems faced by the single parent (Brandwein et al, 1974). Therefore, whilst in both types of absence contact with the father is limited, the accompanying stress is greater when the husband and wife have been divorced and are consequently permanently separated.

The city in which the study was carried out provided an ideal setting. It housed a Royal Naval base and a large proportion of its inhabitants were Naval personnel and their families. Also, in common with other large cities, there were a number of single parent families in which children were being reared by their mothers alone. Thus it was possible to find children experiencing both permanent and intermittent absence of the father. Absence here was defined as lasting at least a year before the child was 5 years of age. In the case of children whose parents were divorced the father was absent from home at the time of the study. This was not always the case with the children of naval families.

In order to investigate the influence of different types of father absence on the cognitive development and incidence of emotional and behavioural problems, children aged between 5 years 0 months and

7 years 11 months were studied. This age group was selected because, with the exception of studies of sex-role development, few investigations have been carried out on children younger than eight years of age. This was particularly true for studies of cognitive development. It was considered useful, therefore to obtain information about children experiencing father absence who were younger than 8 years of age. The lower limit was set at 5 years to ensure firstly that all subjects could be tested at school and secondly that an assessment of the children could be obtained from class teachers in addition to information obtained from mothers.

Both male and female children were included in the sample. Results of previous research in which significant differences were reported between father absent and father present children indicated that boys appeared to be more affected by such absence than were girls. This was true for studies of sex-role development (Bach, 1946; Santrock, 1970), cognitive functioning (Lessing et al, 1970; Santrock, 1972) and personal adjustment (Hoffman, 1971; Lecorgne & Laosa, 1976).

Children from two social classes, middle class and working class were studied. Research projects examining father absence that have compared children from different social classes have demonstrated that results may vary according to social class. Again this has been demonstrated in the case of research into sex-role development (Bach, 1946; Hetherington, 1966), cognitive functioning (Lessing et al, 1970) and personal adjustment (Douglas, 1970). The social class of families was determined using the occupation of the fathers as the index. In the case of families in which the parents were divorced the fathers'

occupations whilst they were living with their families was used as the index. Occupations were classified using the Registrar General's Classification of Occupations. Occupations of the level of foremen, skilled manual worker and unskilled manual worker were classified as working class. Occupations classified as having higher status than this were termed middle class. In the case of the Royal Naval sample officers were classified as middle class, non commissioned officers and other ranks were classified as working class.

Although the assertion that family size has an influence on child development has been questioned (Price & Hare, 1969), some studies have suggested that it should be taken into account in investigations of father absence (Biller, 1974; Douglas, 1970). This factor, therefore, was controlled by including only those children who had one or two siblings.

One of the limitations of earlier studies has been that samples have been drawn from narrow populations such as those children referred to child guidance clinics (Lessing et al, 1970; Maxwell, 1961) or those convicted of juvenile delinquency (Anderson, 1968; Little, 1965). The use of such populations implies a search for problem behaviour associated with father absence, thus presupposing it does exist. Therefore, in order to avoid this, the sample of children was drawn from the whole population of the city in which the study was carried out.

The aims of the study were to examine whether differences existed in the cognitive development and incidence of emotional and behavioural problems in three groups of children. The three groups were children

whose fathers were permanently absent due to divorce, those whose fathers were intermittently absent due to their occupation and finally children whose fathers were not absent for longer than a working day. In addition it was the intention to examine sex of child and social class as independent variables.

The cognitive development of the children was assessed using the Wechsler Intelligence Scale for Children (WISC). In the light of previous findings (Lessing et al, 1970; Maxwell, 1961) it was predicted that children experiencing either permanent or intermittent father absence would obtain lower IQ scores and lower sub-tests scores on the WISC than would children whose fathers were not absent.

Interactions were predicted both between father absence and social class and father absence and sex of child. It was expected that working class children would be more affected by father absence than would middle class children. Previous research in which father absence has been found to be associated with cognitive deficits has indicated that children of lower socioeconomic status were more affected by father absence than were middle class children (Lessing et al, 1970). It was also expected that boys would be more affected by father absence than would girls (Hillenbrand, 1971; Santrock, 1972).

In all cases it was expected that scores of children experiencing permanent father absence would be lower than those of children whose fathers were absent intermittently.

The incidence of emotional and behavioural problems exhibited by the children was assessed using the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) (Rutter, Tizard & Whitmore, 1970)

and the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2) (Rutter, 1967). It was predicted that the incidence of emotional and behavioural problems would be highest in those children whose fathers were permanently absent and that those children experiencing intermittent father absence would exhibit a higher incidence of problems than those children experiencing no absence. It was also predicted that the number of children classified as suffering from a psychiatric disorder, according to their scores on the questionnaires, will be highest in the permanently father absent group and lowest in the no absence group.

Interactions between father absence and sex of child were expected. It was predicted that boys experiencing father absence would be more affected by father absence than would girls (Biller, 1974). Interactions were also expected between social class and type of father absence. It was predicted that working class children would be more affected by father absence than would middle class children (Biller, 1974; Cobliner, 1963; Douglas, 1970). Finally, in the case of the three specific problems considered separately it was expected that, firstly the incidence of bed-wetting would be lower in the intermittent father absence group than in the other two groups (Matthews, 1969), secondly that the incidence of poor peer relations would be higher in the two father absence groups (Stolz et al, 1954; Tiller, 1958) and thirdly that the incidence of stealing would be higher in the permanent absence group than in the other two groups (Douglas, 1970; Gibson, 1969).

METHOD

Design

Social class, middle and working class, sex of child and type of father absence, permanent, intermittent and no absence, were manipulated in a 2 x 2 x 3 factorial design. There were, therefore, 12 independent groups of subjects. In the investigation of cognitive development a fourth factor, employing repeated measures was added. In the analysis of IQ scores this was a three level factor, Full Scale, Verbal Scale and Performance Scale IQ. In the analyses of verbal and performance sub-tests the factor had five levels, one for each sub-test.

Subjects

Fifty three children aged between 5 years 0 months, and 7 years 11 months whose mean age was 6 years 6 months were studied. Both males and females from middle class and working class families were included in the sample. There were three groups. They were, firstly a group of children whose fathers were intermittently absent due to their occupation. These fathers were all members of the Royal Navy. Secondly there was a group of children whose fathers were permanently absent due to parental divorce. Finally there was a group of children whose fathers were not absent. The numbers of children in each type of father absence-sex of child-social class cell, together with the mean ages of children in each cell is given in Table 2.1.

Table 2.1

The numbers of children in each type of father absence - sex of child - social class cell and the mean ages of children in each cell

		Intermittent Absence Group		Permanent Absence Group		No Absence Group	
		Number	Mean Age	Number	Mean Age	Number	Mean Age
Males	Middle Class	4	6yrs 9mths	2	7yrs 0mths	5	6yrs 9mths
	Working Class	5	5yrs 11mths	6	6yrs 8mths	5	6yrs 0mths
Females	Middle Class	6	6yrs 8mths	3	6yrs 6mths	4	6yrs 6mths
	Working Class	5	6yrs 0mths	4	7yrs 0mths	4	7yrs 0mths

Total number of subjects = 53 Mean age = 6 years 6 months

Materials

(a) Wechsler Intelligence Scale for Children (WISC)

The cognitive development of the children was assessed using the WISC. This is an intelligence scale for children aged from 5 years to 15 years 11 months. The scale consists of 10 sub-tests, five classified as verbal and five as performance. The five verbal

sub-tests are General Information, Comprehension, Arithmetic, Similarities and Vocabulary. The five performance sub-tests are Picture Completion, Picture Assembly, Block Design, Object Assembly and Coding. Three Intelligence Quotient (IQ) scores may be obtained, Full Scale, Verbal Scale and Performance Scale IQ, in addition to standard scores on each sub-test.

(b) A Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

The incidence of emotional and behavioural problems exhibited by the children, as reported by the mother, was assessed using the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2). This is a questionnaire comprising three sections. The first is a section on health problems, the second a section on habits and a third listing a series of descriptions of behaviour. A score of nought, one or two is awarded according to the response made to each item and the total score is obtained by summing response scores over all sections. The higher the scores obtained, the higher is the incidence of parental report of problems. A score of 13 or more indicates that the presence of some sort of psychiatric disorder is likely (Rutter, Tizard & Whitmore, 1970). Sub-scores for neuroticism are obtained by summing responses to items C, G, V 6 and 15; ('suffers from asthma', 'had tears on arrival at school or refused to go into the building', 'does he/she have any sleeping difficulties?', 'often worried, worries about many things', 'tends to be fearful or afraid of new things or new situations'). Sub-scores for anti-social

behaviour are obtained by summing scores of items III, 3, 13, 17 and 18 ('does he/she ever steal things?','often destroys own or others property', 'is often disobedient', 'often tells lies', 'bullies other children'). When a child obtains a total score of 13 or more these sub-scales are used to classify the psychiatric disorder. If the highest sub-score is for neuroticism, then the disorder is classified as neurotic. If the highest sub-score is for anti-social behaviour then the disorder is classified as anti-social (Rutter, Tizard & Whitmore, 1970). A copy of the questionnaire may be found in Appendix 2.

(c) A Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

The incidence of emotional and behavioural problems exhibited by the children as reported by their class teachers was assessed using the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2). This is a questionnaire consisting of 26 items which are descriptions of behaviour and for each item the teacher is asked to state whether that description 'doesn't apply', 'applies somewhat' or 'certainly applies'. A score of nought is given for the first of these, one for the second and two for 'certainly applies'. A total score is obtained by summing the scores of all items. A score of nine or more indicates that the presence of some sort of psychiatric disorder is likely (Rutter, 1967). Sub-scores for neuroticism are obtained by summing responses to items 7, 10, 17 and 23 ('often worried, worries about many things', 'often appears miserable, unhappy, tearful or distressed', 'tends to be fearful or afraid of new things or new

Footnote

Throughout the text the term 'psychiatric disorder' refers to disorder indicated by the results of the Behaviour Questionnaires and not to disorder revealed by full scale psychiatric diagnostic procedures.

situations', 'has had tears on arrival at school or refused to go into the building'). Sub-scores for anti-social behaviour are obtained by summing responses to items 4, 5, 15, 19, 20 and 26 ('often destroys own or others belongings', 'frequently fights or is extremely quarrelsome with other children', 'is often disobedient', 'often tells lies', 'has stolen things on one or more occasions in the past twelve months', 'bullies other children'). When the child obtains a score of nine or more these sub-scales are used to classify the psychiatric disorder. If the highest sub-score is for neuroticism, then the disorder is classified as neurotic. If the highest sub-score is for anti-social behaviour then the disorder is classified as anti-social. A copy of the questionnaire may be found in Appendix 2.

(d) Environmental and Biographical Questionnaire

This was designed to obtain biographical details about the children and information about their environment and interaction with parents. A copy of the questionnaire may be found in Appendix 2.

Procedure

(a) Procedure used to obtain subjects

(i) Intermittent Absence Group. A list of accommodation addresses of both officers and other ranks was provided by the Welfare Department of the Royal Navy without the names of the current occupants or any information about them. A random sample of 100 addresses from each of the two types of accommodation was drawn and the names of those living at these addresses was obtained from the

electoral register. This was done as it was felt that a personal letter would be more likely to elicit a reply than would one addressed to 'the householder'.

A letter and questionnaire were sent to each household, together with a business reply envelope for the questionnaire's return. In order to avoid the names of the respondents having to be written on the questionnaire, and to ensure confidentiality, each questionnaire was coded to enable its identification if returned. Of those questionnaires returned the ones indicating the existence of either two or three children, at least one of whom was in the required age group, were retained. The selection of random samples of addresses was continued until the required number of children in the intermittent absence group was obtained. Copies of the letter and questionnaire may be found in Appendix 1.

(ii) Permanent Absence Group. As it was not possible to enlist the help of any outside agency in obtaining the names and addresses

Footnote

For a child to be included in the intermittent or permanent father absence group he or she had to have experienced absence of at least one year before reaching the age of 5 years. It was not possible to assess accurately the total length of absence for each child. In the naval group, mothers could not recall in most cases the exact length of the various absences. In the divorced group the length of absence varied from one year to most of the child's life.

There is evidence that a difference exists between those who respond and those who do not respond to appeals for help with research projects (Cox et al, 1977;[1] Rutter et al, 1970). Families who do not respond have been found to include a higher proportion of children exhibiting reading backwardness, behavioural deviance and psychiatric disorder (Cox et al, 1977). It is not possible to assess how far this factor would influence the results of the present investigation. However, it suggests that the incidence of problems discovered in the sample studied here would be lower than that found in a truly random sample.

(1) Cox, A., Rutter, M., Yule, B & Quinton, D. 'Bias resulting from missing information: Some epidemiological findings. British Journal of Preventative and Social Medicine, 1977,31,131-136.

(iii) No Absence Group. Random samples of names and addresses were obtained from the electoral register. As far as possible names were selected from the same areas as the naval sample. In the case of working class subjects it was decided to obtain most names from council estates as this most closely matched the housing situation of the naval group.

Letters and questionnaires were sent as in the case of the other two groups. Those who replied were included in the sample if they had either two or three children, one of whom was in the required age group. More random samples were drawn until enough subjects were obtained.

Whilst the procedure outlined above was designed to provide samples that were as far as possible random, two sources of bias remained. The first was that only those parents who replied to the initial letter could be contacted and the second was that it was only possible to reach those divorced women who had not changed their address since the time of their divorce.

The next stage in obtaining subjects was to contact again those families containing at least one child of the required age. Letters were sent asking that the researcher should be allowed to visit the home to talk about the child selected. Timetables were sent out and mothers were asked to indicate times when it would not be convenient for the researcher to call. If the timetable was returned another letter was sent naming a definite time for a visit. If the timetable was not returned a different letter was sent suggesting a possible time which mothers were asked to change if it was not convenient. Copies of the letters and the timetable may be found in Appendix 1.

In all cases in which the timetable was returned and an appointment made the mothers were interviewed. In those cases in which timetables were not returned four mothers could not be contacted and replacement families were obtained. As a result of this procedure 53 children attending 20 different schools were obtained.

(b) Procedure of the study

The researcher called on the mother at the time that had been arranged. Initially she was told that a study was being carried out to investigate certain aspects of the development of young children. Any questions about how names had been obtained and about how confidentiality of responses was to be assured were answered.

The mothers were informed that participation in the project would involve several things. These would be, firstly an interview in which information about the child and the family would be asked for, secondly that the mothers would be asked to complete Scale A(2), thirdly that she should give permission for her child to be tested at school and finally that the child's class teacher should complete the Scale B(2) giving information about the child's behaviour in school.

All mothers agreed to participate and the researcher carried out the interview. The length of the interview with the mother varied from 30 minutes to over an hour. Some of the mothers took the opportunity to talk about family problems and anxieties and it was in these cases that the interview time exceeded 30 minutes.

After the interview questionnaire had been completed the procedure for the completion of Scale A(2) was explained. Mothers were asked to

complete the scale either while the researcher was present or later if they wished. In the latter case a reply paid envelope was provided for the questionnaire's return. Finally the mothers were asked to sign a form agreeing that their child should be tested in school and that the class teacher should complete the Scale B(2).

The permission of the Local Education Authority to contact primary schools attended by the children was obtained and in the first instance head teachers of schools were contacted by letter. A copy of the letter may be found in Appendix 1. No school refused to cooperate.

As soon as the mothers had been interviewed and their permission to see the children had been given, individual schools were contacted again and appointments made. Children were seen at school in almost all cases approximately one week after the interview with the mother. Testing the children took 45 minutes. At the same time as the children were tested the class teachers were approached and asked to complete the behaviour questionnaire, Scale B(2). A reply paid envelope was provided for its return.

The school visits were begun half way through the Autumn Term so that even in the case of those children who had only just started to attend, teachers had at least six weeks contact with them. With few exceptions teachers returned the questionnaires without further action on the part of the researcher. In all the other cases they were received after a reminder had been sent.

RESULTS

Investigation of Cognitive Development

Cognitive Development of the children was assessed using the WISC. Measures of Full Scale, Verbal Scale and Performance Scale IQs were calculated in addition to the scores on the 10 sub-tests. In the WISC sub-tests one to five are classified as verbal. These are General Information, Comprehension, Arithmetic, Similarities and Vocabulary. Sub-tests 6 to 10 are classified as Performance. These are Picture Completion, Picture Arrangement, Block Design, Object Assembly and Coding.

(a) Examination of Full Scale, Verbal Scale and Performance Scale IQ Scores

IQ scores obtained by the children may be found in Appendix 3.1.1. A summary of the scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each IQ scale may be found in Table 2.2. A four way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class; middle class and working class and IQ scale, Full, Verbal and Performance, with a repeated measure on the last factor. Since the cell frequencies for the father absence - sex - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant

Table 2.2

Means and Standard Deviations of IQ scores obtained by children experiencing intermittent, permanent or no father absence on the Full Scale, Verbal Scale and Performance Scale of the WISC

IQ SCORE		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	4	2	5	5	6	5	6	3	4	5	4	4	53
Full	Mean	115.50	112.50	115.20	112.00	99.50	105.20	111.33	109.33	118.25	100.00	102.25	105.50	108.42
Scale	S.D.	13.02	2.12	15.51	8.49	20.01	20.24	12.18	9.29	10.78	3.74	4.03	4.20	13.06
Verbal	Mean	113.00	110.50	113.40	105.60	96.17	102.00	110.00	112.67	112.25	94.80	96.50	99.50	104.72
Scale	S.D.	13.06	6.36	19.02	9.18	13.93	21.94	12.85	8.50	10.69	6.80	7.94	5.45	13.51
Performance	Mean	115.75	112.00	115.00	116.80	103.00	107.80	112.67	104.67	121.75	105.80	107.75	111.00	111.02
Scale	S.D.	12.04	2.83	10.61	12.76	23.09	16.12	11.59	13.61	12.81	7.40	2.36	4.97	12.89

S.D. = Standard Deviation

interactions may be found in Table 2.3. A complete table of the results of this analysis may be found in Appendix 4.1.1.

Table 2.3

A summary of the results of the analysis of variance of the Full Scale, Verbal Scale and Performance Scale of the WISC, showing main effects and significant interactions

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	190.29	1	190.29	< 1	n.s.
Social Class (B)	2811.94	1	2811.94	6.34	.025
Type of Father Absence (C)	471.91	2	235.96	< 1	n.s.
Subjects within groups	18189.65	41	443.65		
IQ Score (D)	656.66	2	328.33	10.12	.01
B x D	282.23	2	141.12	4.35	.025
Subjects within groups x D	2660.90	82	32.45		

Overall, there was no effect due to type of father absence (F = <1, d.f. = 2,41, p > .05) and this factor did not interact with any of the other factors.

Two significant main effects were obtained. One was due to social class (F = 6.34, d.f. = 1,41, p < .025) and indicated that middle class children obtained higher scores over all three IQ measures than did

working class children. The other was due to type of IQ scale (F = 10.12, d.f. = 2,82, p < .01). Examination of the means of the three IQ scales shown in Table 2.2 indicated that the highest scores were obtained on the Performance Scale and the lowest on the Verbal Scale.

A significant two way interaction was obtained between social class and IQ score (F = 4.35, d.f. = 2,82, p < .025). An analysis of simple main effects of the social class factor at different levels of the IQ factor revealed significant effects for Full Scale IQ (F = 16.54, d.f. = 1,41, p < .01) and Verbal Scale IQ (F = 22.20, d.f. = 1,41, p < .01). An examination of cell means indicated that middle class children obtained higher scores than did working class children on measures of Full Scale and Verbal Scale IQ.

(b) Examination of Verbal Sub-Tests Scores

Verbal sub-tests scores obtained by the children may be found in Appendix 3.1.2. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each sub-test may be found in Table 2.4. A four way analysis of variance was carried out on the scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class, middle class and working class and sub-test, one level for each of the five sub-tests, with repeated measures on the last factor. Since the cell frequencies for the father absence - sex - social class cells were unequal, analysis of unweighted means was

Table 2.4

Means and Standard Deviations of scores obtained by children experiencing intermittent, permanent or no father absence on the five verbal sub-tests of the WISC

Verbal Sub-Tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	4	2	5	5	6	5	6	3	4	5	4	4	53
General Information	Mean	11.25	10.50	10.40	8.20	8.83	8.20	8.67	8.67	10.25	7.80	9.00	9.25	9.13
	S.D.	1.50	12.12	4.83	3.27	2.64	2.17	3.14	2.89	2.36	1.92	3.56	1.50	2.77
Comprehension	Mean	11.75	11.50	12.00	12.60	9.67	10.80	10.50	12.00	12.25	10.60	8.25	10.50	10.96
	S.D.	5.06	0.70	2.55	2.30	3.14	5.07	3.78	1.00	2.22	2.61	0.95	3.87	3.14
Arithmetic	Mean	15.50	11.50	12.40	12.00	10.67	11.80	14.00	14.67	12.50	10.80	11.00	8.75	12.09
	S.D.	2.65	2.12	2.97	3.54	3.56	4.87	1.67	1.53	2.38	1.64	1.83	1.89	3.09
Similarities	Mean	8.75	10.50	10.80	9.20	8.00	9.80	11.33	11.00	12.25	7.60	8.00	9.50	9.64
	S.D.	2.94	2.12	5.40	2.77	2.37	3.11	3.67	2.65	3.86	1.67	2.45	1.00	3.14
Vocabulary	Mean	13.00	14.50	13.00	12.40	9.83	11.00	12.00	13.67	12.50	9.20	11.00	11.75	11.74
	S.D.	2.16	0.71	2.00	2.70	3.60	4.80	3.28	1.15	2.89	2.39	0.00	2.50	2.92

S.D. = Standard Deviation

employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments. A summary of the results of this analysis showing main effects may be found in Table 2.5. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.1.2.

Table 2.5

A summary of the results of the analysis of variance of the verbal sub-tests scores of the WISC showing main effects

Source	S.S.	d.f.	M.S.	F	Significance levels
Sex (A)	8.39	1	8.39	< 1	n.s.
Social Class (B)	223.48	1	223.48	10.53	.01
Type of Father Absence (C)	4.96	2	2.48	< 1	n.s.
Subjects within groups	870.52	41	21.23		
Sub-Test Score (D)	329.83	4	82.46	13.63	.01
Subjects within groups x D	992.18	164	6.05		

Overall, there was no effect due to type of father absence (F = < 1, d.f. = 2,41, p > .05) and this factor did not interact with any of the other factors.

A significant main effect due to social class was obtained ($F = 10.53$, d.f. = 1,41, $p < .01$). Thus, taking all verbal sub-tests together, middle class children obtained significantly higher scores than did working class children.

A significant main effect due to type of sub-test was also obtained ($F = 13.63$, d.f. = 1,164, $p < .01$). An examination of the mean scores of each verbal sub-test shown in Table 2.4 revealed that highest mean scores were obtained on the Arithmetic and Vocabulary sub-tests and lowest on General Information.

(c) Examination of Performance Sub-Tests Scores

Scores obtained by children on the Performance sub-tests of the WISC may be found in Appendix 3.1.3. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each sub-test may be found in Table 2.6. A four way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class, middle class and working class and sub-test, with one level for each of the five sub-tests. The last factor was a repeated measures factor. Since the cell frequencies for the type of father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments. A summary of the results of this analysis showing main effects may be found in Table 2.7. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.1.3.

Table 2.6

Means and Standard Deviations of scores obtained by children experiencing intermittent, permanent or no father absence on the five performance sub-tests of the WISC

Performance Sub-Tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	4	2	5	5	6	5	6	3	4	5	4	4	53
Picture Completion	Mean	12.25	9.50	9.40	12.40	9.67	11.40	12.67	8.67	13.25	11.60	10.75	10.00	11.09
	S.D.	2.36	2.12	1.95	2.30	4.55	3.21	2.58	1.53	3.30	2.19	1.71	1.63	2.82
Picture Arrangement	Mean	10.50	12.50	10.20	12.80	9.67	11.40	11.83	9.33	12.75	10.20	11.00	10.05	11.02
	S.D.	3.79	0.71	2.86	1.48	4.13	3.21	3.25	1.53	2.63	2.05	2.71	2.52	2.82
Block Design	Mean	14.75	13.50	13.80	13.60	10.33	12.80	13.50	9.00	13.50	10.80	11.75	11.50	12.42
	S.D.	2.87	0.71	2.77	3.58	3.44	2.17	2.95	2.65	3.70	3.27	2.22	3.51	3.13
Picture Assembly	Mean	12.75	10.50	13.80	13.20	10.50	11.80	14.33	13.33	12.50	11.60	11.00	12.50	12.40
	S.D.	3.30	0.71	2.28	3.42	3.62	1.64	2.58	6.11	2.65	1.34	1.63	2.89	2.86
Coding	Mean	11.00	12.50	11.40	10.40	12.00	8.40	8.67	10.00	13.50	9.80	11.00	13.50	10.85
	S.D.	2.58	0.71	2.97	3.13	2.76	3.21	1.97	3.46	1.00	0.45	1.15	2.08	2.69

S.D. = Standard Deviation

Table 2.7

A summary of the results of the analysis of variance of the performance sub-tests scores of the WISC, showing main effects

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	1.30	1	1.30	< 1	n.s.
Social Class (B)	20.18	1	20.18	1.17	n.s.
Type of Father Absence (C)	63.91	2	31.96	1.85	n.s.
Subjects within groups	708.79	41	17.29		
Sub-Test Score (D)	106.20	4	26.55	4.78	.01
Subjects within groups x D	910.79	164	5.55		

Overall, there was no effect due to type of father absence (F = 1.85, d.f. = 2,41, p > .05) and this factor did not interact with any other factor.

One significant main effect due to type of sub-test was obtained (F = 4.78, d.f. = 4,164, p < .01). An examination of the mean scores of each Performance sub-test shown in Table 2.6 indicated that the highest mean score was obtained on the Object Assembly sub-test and the lowest on the Coding sub-test.

A summary of the results of the investigation of cognitive development

1. Father Absence had no effect on IQ score, Verbal sub-tests scores and Performance sub-tests scores.

2. Middle class children obtained higher scores than did working class children on the Full and Verbal IQ Scales of the WISC.

3. Middle class children obtained higher scores than did working class children over all the Verbal sub-tests of the WISC.

The Investigation of the Incidence of Emotional and Behavioural Problems

The incidence of emotional and behavioural problems exhibited by the children was assessed using two measures. The first was the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2). The second was the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2). From both of these scales it was possible to obtain three scores, a total score, a neuroticism sub-scale score and an anti-social behaviour sub-scale score. The higher the score the larger was the number of problems reported. A score of 13 or more on Scale A(2) and a score of nine or more on Scale B(2) indicated the likely presence of some psychiatric disorder (Rutter, 1967; Rutter, Tizard & Whitmore, 1970). Children obtaining such a score were classified as exhibiting anti-social or neurotic disorder according to which of their sub-scale scores, neurotic or anti-social behaviour, was the higher.

(a) Examination of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

(i) Total Scores: Total scores obtained by the children may be found in Appendix 3.1.4. A summary of these scores showing the means and standard deviations obtained by each type of father absence - social class - sex of child sub-group may be found in Table 2.8. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of the analysis showing main effects and significant interactions may be found in Table 2.9. A complete table of the results of the analysis may be found in Appendix 4.1.4.

Overall there was no effect due to type of father absence ($F = <1$, d.f. = 2,41, $p > .05$). One significant main effect of social class was obtained ($F = 5.24$, d.f. = 1,41, $p < .05$).

A significant interaction between type of father absence, social class and sex of child ($F = 3.40$, d.f. = 2,41, $p < .05$) was obtained. The three-way interaction was examined using an analysis of simple main effects of type of father absence for each combination of levels of the sex and social class factors. The results of this analysis are shown in Table 2.10. A significant result was obtained for working class girls ($F = 3.70$, d.f. = 2,41, $p < .05$). The mean scores obtained by working class girls whose fathers were intermittently or permanently

Table 2.8

Means and standard deviations of total scores obtained by children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	8.25	10.50	6.60
		Standard Deviation	5.32	3.54	3.36
		Number of Subjects	4	2	5
	Working Class	Mean	10.00	10.17	11.00
		Standard Deviation	4.53	6.34	6.48
		Number of Subjects	5	6	5
FEMALES	Middle Class	Mean	8.17	4.00	8.50
		Standard Deviation	6.31	2.65	2.65
		Number of Subjects	6	3	4
	Working Class	Mean	13.00	15.75	6.25
		Standard Deviation	3.39	6.95	4.19
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	9.85	10.47	8.17
		Standard Deviation	5.07	6.60	4.57
		Number of Subjects	20	15	18

Table 2.9

A summary of the results of the analysis of variance of the total scores obtained on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2), showing main effects and significant interactions

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	0.24	1	0.24	< 1	n.s.
Social Class (B)	136.69	1	136.69	5.24	.05
Type of Father Absence (C)	39.06	2	19.53	< 1	n.s.
A x B x C	177.31	2	88.65	3.40	.05
Subjects within groups	1070.62	41	26.11		

absent were higher than the mean score of working class girls whose fathers were not absent. A test was performed comparing the means of the first two with the mean of the third and a significant result was obtained ($F = 6.81$, d.f. = 1,41, $p < .025$). That is working class girls experiencing intermittent or permanent father absence exhibited a higher incidence of emotional and behavioural problems than did those working class girls whose fathers were not absent.

Table 2.10

The results of the analysis of simple main effects of type of father absence on the total scores of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F	Significance levels
Type of Absence x Middle Class Boys	30.97	2	15.48	< 1	n.s.
Type of Absence x Working Class Boys	2.30	2	1.15	< 1	n.s.
Type of Absence x Middle Class Girls	50.80	2	25.40	< 1	n.s.
Type of Absence x Working Class Girls	193.08	2	96.54	3.70	.05
Subjects within groups	1070.62	41	26.11		

Using the table of total scores found in Appendix 3.1.4, the number of children who obtained total scores of 13 or more, the score considered to indicate the presence of psychiatric disorder (Rutter, Tizard & Whitmore, 1970), was calculated for each of the three absence groups, intermittent, permanent and no absence. The number of children in each absence group obtaining such a score may be found in Table 2.11.

Table 2.11

The number of children in each of the father absence groups obtaining a score of thirteen or more on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
13 or more	35	7	46.67	7	11.11	2
Less than 13	65	13	53.33	8	88.89	16
TOTAL	100	20	100	15	100	18

Examination of the scores indicated that the highest incidence of psychiatric disorder was found in the permanent absence group and the lowest in the no absence group. However the results of a chi squared test carried out on the scores was not significant ($\chi^2 = 5.26$, d.f. = 2, $p > .05$). That is father absence had no effect on the incidence of psychiatric disorder.

(ii) Neuroticism and Anti-Social Behaviour Sub-Scales: A neuroticism sub-scale score was obtained for each child by summing scores obtained on items C, G, V, 6 and 15 ('suffers from asthma', 'had tears on arrival at school or refused to go into the building', 'does he/she have any sleeping difficulties?', 'often worried, worries about many things', 'tends to be fearful or afraid of new things or new situations'). Scores obtained by children on this sub-scale may be found in Appendix 3.1.5.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items III, 3, 13, 17 and 18 ('does he/she ever steal things?', 'often destroys own or others property', 'is often disobedient', often tells lies', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.1.6.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores of 13 or more. Rutter, Tizard and Whitmore (1970) used the neurotic and anti-social behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was carried out on those children obtaining total scores of 13 or more in the present study. Sixteen children obtained such a score. One child experiencing permanent father absence obtained equal scores on the neuroticism and anti-social sub-scales and so was not included. The distribution of the remaining children into neurotic or anti-social classifications was calculated for each of the three father absence groups, permanent, intermittent or no absence and may be found in Table 2.12.

Two Fisher Exact Probability tests were carried out, one between the permanent father absence group and the no absence group and the other between the intermittent absence group and the no absence group. No significant results were obtained. That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

Table 2.12

The incidence of neurotic and anti-social disorders exhibited by children in each of the three father absence groups as measured by the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	2	2	1
Anti-social	5	4	1
	Total number of subjects = 15		

(iii) Analysis of individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2):

Five items of Scale A(2) were examined separately. One of the items referred to bed-wetting, of interest because of the report by Matthews (1969) that children from naval families exhibited a lower incidence of bed-wetting than did a control group. One item referred to stealing, of interest because of the number of studies that report an association between father absence and delinquency (eg. Douglas, 1970; Gibson, 1969). Finally three items referred to behaviour associated with poor peer relationships. Both Stolz (1954) and Tiller (1958) have reported that children whose fathers are absent exhibit poor peer relationships compared to children whose fathers are not absent.

The items examined separately were:

In the section on Health Problems

D. Does your child wet the Bed?

In the section on Habits

III. Does your child ever steal things?

In the Behaviour section

4. Frequently fights is extremely quarrelsome with other children

5. Not much liked by other children

18. Bullies other children

As the replies to these items were to be examined individually it was decided to transform the responses to nominal data. That is if the response was 'doesn't apply' then the response was classified 'no'. Certainly applies or applies somewhat were classified 'yes'. The analysis of responses posed certain problems. As the data was nominal the statistical tests that could be used were limited. Three factors were of interest, these were type of father absence, sex of child and social class. No tests were available that could take into account all three factors in one analysis as can the analysis of variance for interval data. Consequently decisions had to be made as to how the data could be arranged in order to provide the maximum amount of information. As father absence was the central concern of the study it was decided to compare subjects on this factor. However, both sex and social class were also considered to be important factors to be examined. To divide the data up both by sex and social class would result in two problems. Firstly the number of subjects to be compared would be very small and secondly so many tests would have to be carried

out that the significance level would have to be set very high in order to avoid an unacceptable risk of making Type I errors.

A compromise was reached. It was decided to split the data into two groups by social class but to collapse the sex factor, thus discounting sex differences. Each of the five questionnaire items were examined separately and a two by three matrix was constructed for each item for each of the two social classes. That is the data was arranged into three groups according to type of father absence, permanent, intermittent or none, and different responses, yes or no. However, the expected frequencies of the cells was still too low to enable chi-squared tests to be used, so the data was rearranged again. The group experiencing no father absence was compared with the permanent father absence group and the intermittent absence group separately using the Fisher Exact Probability Test and setting the required significance level at .025. Thus two by two matrices were constructed using one of the two combinations of the absence factor as one dimension and a response of yes or no as the other. Tables of the data may be found in Appendices 3.1.7 and 3.1.8. No significant results were obtained. That is different types of father absence were not associated with different responses to any of the five questionnaire items examined separately.

Summary of the Results Obtained from the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

1. Working class girls experiencing permanent or intermittent father absence exhibited a higher incidence of emotional and behavioural problems than did working class girls whose fathers were not absent.

2. Father absence had no effect on the number of children obtaining total scores of 13 or more on the scale.

3. Father absence had no effect on the relative incidence of neurotic or anti-social disorder.

4. Father absence had no effect on the incidence of bed-wetting, poor peer relationships or stealing.

(b) Examination of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

(i) Total scores: Total scores obtained by the children may be found in Appendix 3.1.9. A summary of these scores showing the means and standard deviations obtained by each sub-group may be found in Table 2.13. A three-way analysis of variance was carried out on the scores. The three factors were type of father absence, intermittent, permanent and no absence; sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis may be found in Table 2.14. A complete table of the results of the analysis may be found in Appendix 4.1.5.

A significant main effect due to type of father absence was obtained ($F = 3.62$, d.f. = 2,41, $p < .05$) and a further significant effect of social class was obtained ($F = 4.37$, d.f. = 1,41, $p < .05$ Both of these factors were also involved in a significant interaction

Table 2.13

Means and standard deviations of total scores obtained by children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	0.00	10.00	0.80
		Standard Deviation	0.00	1.41	0.84
		Number of Subjects	4	2	5
	Working Class	Mean	6.40	6.17	4.40
		Standard Deviation	4.83	6.11	4.51
		Number of Subjects	5	6	5
FEMALES	Middle Class	Mean	1.17	2.00	3.75
		Standard Deviation	2.86	2.00	3.30
		Number of Subjects	6	3	4
	Working Class	Mean	5.00	7.00	3.00
		Standard Deviation	4.53	5.48	2.71
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	3.20	6.07	2.94
		Standard Deviation	4.28	5.15	3.21
		Number of Subjects	20	15	18

Table 2.14

A summary of the results of the analysis of variance of the total scores obtained on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2), showing main effects and significant interactions

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	11.52	1	11.52	< 1	n.s.
Social Class (B)	68.37	1	68.37	4.37	.05
Type of father absence (C)	113.16	2	56.58	3.62	.05
A x B x C	101.75	2	50.88	3.25	.05
Subjects within groups	641.62	41	15.65		

with sex of child (F = 3.25, d.f. = 3,41, p < .05). This interaction was examined using an analysis of simple main effects due to type of father absence for each combination of levels of the sex and social class factors. The results of this analysis are shown in Table 2.15. A significant result was obtained for middle class boys (F = 7.99, d.f. = 2,41, p < .01). Mean scores obtained by the middle class boys whose fathers were permanently absent were higher than those obtained by middle class boys whose fathers were intermittently or not absent. A test was carried out to compare the mean of the first group with the means of the second and third group and a significant result was obtained (F = 15.86, d.f. = 1,41, p < .01). That is middle class boys experiencing permanent father absence exhibited a higher incidence of

emotional and behavioural problems than did middle class boys experiencing intermittent or no absence.

Table 2.15

The results of the analysis of simple main effects of type of father absence on the total scores of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F	Significance Level
Type of Absence x Middle Class Boys	250.16	2	125.08	7.99	.01
Type of Absence x Working Class Boys	9.66	2	4.83	< 1	n.s.
Type of Absence x Middle Class Girls	14.04	2	7.02	< 1	n.s.
Type of Absence x Working Class Girls	24.24	2	12.12	< 1	n.s.
Subjects within groups	641.62	41	15.65		

Using the table of total scores found in Appendix 3.1.9, the number of children who obtained total scores of nine or more, the score considered to indicate the presence of psychiatric disorder (Rutter, 1967) was calculated for each of the three absence groups, permanent, intermittent or no father absence. The number of children in each absence group who obtained such a score may be found in Table 2.16. An examination of the scores indicated that more children in the permanent absence group exhibited psychiatric disorder than in the other two groups.

Table 2.16

The number of children in each of the three absence groups obtaining a score of nine or more on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
9 or more	15	3	40	6	11.11	2
less than 9	85	17	60	9	88.89	16
TOTAL	100	20	100	15	100	18

The expected frequencies in the cells were too small to enable a chi-squared test to be carried out. Two Fisher Exact Probability Tests were carried out, one comparing the intermittent absence group and the no absence group and the other comparing the permanent absence group and the no absence group. No significant results were obtained. Therefore father absence had no effect on the frequency with which scores of nine or more were obtained on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2).

(ii) Neuroticism and Anti-Social Behaviour Sub-Scales:
A neuroticism sub-scale score was obtained for each child by summing scores obtained on items 7, 10, 17 and 23 ('often worried, worries about many things', 'often appears miserable, unhappy, tearful or distressed', 'tends to be fearful or afraid of new things or new situations', 'has had tears on arrival at school or refuses to go into the building'). Scores obtained by children on this sub-scale may be found in Appendix 3.1.10.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items 4, 5, 15, 19, 20 and 26 ('often destroys or damages own or others' property', 'frequently fights or is extremely quarrelsome with other children', 'is often disobedient', 'often tells lies', 'has stolen things on one or more occasions in the past twelve months', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.1.11.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores

of nine or more. Rutter (1967) used the neurotic and anti-social behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was carried out on those children obtaining total scores of nine or more in the present study. Eleven children obtained such a score. One child in the no absence group obtained equal scores on the neuroticism and anti-social sub-scales and so was not included. The distribution of the remaining children into neurotic or anti-social classifications was calculated for each of the three father absence groups and may be found in Table 2.17.

Table 2.17

The incidence of neurotic and anti-social disorders exhibited by children in each of the three father absence groups as measured by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	2	3	1
Anti- Social	1	3	0

Total number of subjects = 10

Two Fisher Exact Probability Tests were carried out, one between the permanent absence group and the no absence group and the other between the intermittent absence group and the no absence group. No significant results were obtained. That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

(iii) Analysis of Individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2).

Four items of Scale B(2) were examined separately. Three of the items referred to behaviour associated with poor peer relationships. These were of interest as research (eg. Stolz et al, 1954; Tiller, 1958) has reported that children whose fathers are absent exhibit poor peer relationships compared to children whose fathers are not absent. One item referred to stealing, of interest because of the number of studies that report an association between father absence and delinquency (eg. Douglas, 1970; Gibson, 1969).

The items examined separately were:

5. Frequently fights or is extremely quarrelsome with other children
6. No much liked by other children
20. Has stolen things on one or more occasions in the last twelve months
26. Bullies other children

The method of analysis was the same as that used in the examination of Scale A(2). That is data was split into two groups, working class and middle class and responses were analysed by means of the Fisher Exact Probability Test. Children in the permanent father

absence group were compared with children in the no father absence group and children in the intermittent absence group were compared with the no father absence group. Two by two matrices were constructed using one of the two combinations of absence on one dimension and a response of yes or no as the other. A table of the data may be found in Appendix 3.1.12 and Appendix 3.1.13. No significant results were obtained. That is father absence was not associated with different responses to any of the four items of Scale B(2) examined separately.

A summary of the results obtained from the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

1. Middle class boys experiencing permanent father absence exhibited a higher incidence of emotional and behavioural problems than did middle class boys experiencing intermittent or no father absence.
2. Father absence had no effect on the number of children obtaining a score of nine or more on the scale.
3. Father absence had no effect on the relative incidence of neurotic or anti-social disorder,
4. Father absence had no effect on the incidence of stealing or poor peer relations.

(c) A Comparison Between the Results of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) and the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

A Pearson Product Moment Correlation was carried out on the scores obtained by children on the two scales. A correlation coefficient

between the two of 0.35 was obtained, which was not significant. Twenty children were classified as exhibiting psychiatric disorder on the basis of their scores on either Scale A(2) or Scale B(2). Of these seven were so classified on both scales.

Examination of Individual Items of the Biographical and Environmental Questionnaire

During the course of the interview with the mother the researcher completed the Biographical and Environmental Questionnaire. Nine items of the questionnaire were subjected to statistical analysis in order to establish whether mothers in the three father absence groups, permanent, intermittent or no absence, differed in their responses.

These items were:

1. How many schools has the child attended?
2. Is the child happy at school?
3. Does mother read with the child?
4. Does father read with the child?
5. Does mother take the child on outings?
6. Does father take the child on outings?
7. Does the father take a big part in managing the child?
8. Has mother been in paid work since the birth of the child?
9. Does the family own its own home?

These items were analysed in the same way as were the separate items of the Children's Behaviour Questionnaires for Completion by Parents and Teachers. The data was split into two groups, middle class and

working class. Within these two groups children permanently father absent were compared with the no father absence group and children intermittently absent were compared with the no father absence group. Two by two matrices were constructed using one of the two combinations of absence as one dimension and responses of yes or no as the other. A table of the data may be found in Appendix 3.1.14 and Appendix 3.1.15. Fisher Exact Probability Tests were carried out on these data and one significant result was obtained. In the middle class group families in which the father was intermittently absent were less likely to live in their own house than were families in which the father was not absent. No other significant results were obtained.

The interview schedules of the permanent absence group were examined to establish which of the children continued to have contact with their fathers since the parental divorce. In the middle class group one boy continued to see his father and one did not whilst none of the fathers of the three girls maintained contact. In the working class group three boys continued to see their fathers and three did not whilst none of the fathers of the four working class girls maintained contact.

Summary of results obtained from the Biographical and Environmental Questionnaire

1. In the middle class group, families in which the father was intermittently absent were less likely to own their own house than were families in which the father was not absent.

2. No significant results were obtained for any other item.

CHAPTER THREE

A DISCUSSION OF THE RESULTS OF THE INVESTIGATION OF FATHER ABSENCE

If the results of the present investigation of the effects of father absence on the cognitive development and incidence of emotional and behavioural problems in children aged between 5 and 7 years are examined some differences between them and those obtained in previous research become apparent.

Examining firstly those findings obtained from the study of cognitive development using the Wechsler Intelligence Scale for Children (WISC), it was found that father absence, both intermittent and permanent was not associated with differences in scores obtained by the children on this test. This was the case for Full Scale, Verbal Scale and Performance Scale IQ and also scores on the ten sub-tests. No significant differences were found associated with father absence alone or interacting with social class or sex of child. This finding is in contrast to those reported by Maxwell (1961) and Lessing et al (1970). In both of these studies the influence of father absence on WISC scores was examined. In both cases differences were found between scores on the WISC obtained by children who had and had not experienced father absence.

In Maxwell's study it was reported that children experiencing father absence after the age of 5 years obtained lower scores on two of the verbal sub-tests, Picture Arrangement, Picture Completion

and Coding. In the case of the study by Lessing et al (1970) it has already been stated that, because of the way that data were analysed, only results significant at the .01 level or greater would be considered valid (see p.54). Given this criterion some results indicating differences in the WISC scores of father absent and father present children were obtained in the study by Lessing et al. Significant interactions were obtained by the researchers between social class and father absence on three verbal sub-tests, Comprehension, Similarities and Vocabulary and also on Verbal IQ scores. There were no differences between father absent and father present middle class children. Significant differences were found in the case of working class children. Father absent children obtained lower mean scores on the three verbal sub-tests and on Verbal IQ than did father present children.

Other studies have also reported that children experiencing father absence obtained lower scores on measures of cognitive performance than did children who had not experienced father absence. This was the case both for children experiencing permanent absence (Blanchard & Biller, 1971; Santrock, 1972) and for investigations of children experiencing intermittent absence (Hillenbrand, 1971; Lee, 1974).

It is, therefore, necessary to consider why no significant differences were found between father absent and father present children in the present study. One reason might be that children in this investigations were younger than those in the studies referred to above. In Maxwell's study subjects were aged between 8 years and 13 years and in the study of Lessing et al subjects were aged

between 9 years and 15 years. It may be, then, that differences do exist between children who have experienced father absence and those who have not, but that they do not appear until after the children have reached 7 years of age.

The discrepancy between the findings of the present study and those reported by Maxwell (1961) and Lessing et al (1970) may also be due to differences in the populations from which the samples for the studies were drawn. In both the earlier investigations children who had been referred to child guidance clinics were studied while in the present investigation samples were drawn from the whole population of the city in which the research was carried out. It may be that children who have emotional and behavioural problems necessitating their attendance at a clinic are more affected by father absence than are children without such problems.

Another difference between Maxwell's study and this one was that in the former absence was defined as occurring after the child was 5 years old, whilst in the latter absence was defined as lasting at least a year before the age of 5 years. Examining results from Maxwell's study it was found that there was no relationship between WISC scores and absence of the father before the age of 5 years. Absence in the case of the study of Lessing et al was defined as two years, not necessarily consecutive, with no control over age of onset of absence. In neither of the earlier studies was the reason for the absence considered, whilst in the present investigation a distinction was made between permanent absence due to divorce and intermittent absence due to the father's occupation.

Whilst no differences were found in the present study that could be associated with father absence, some significant differences between the children were found. Middle class children obtained significantly higher mean scores on both Full Scale and Verbal IQ than did working class children. There was no significant difference between the two social class groups in the scores obtained on the measure of Performance IQ. In addition to this middle class children obtained significantly higher scores on verbal sub-tests than did working class children. Similar findings have been reported many times by other researchers (eg. Davie et al, 1972; Douglas et al, 1968). Working class children have repeatedly been found to obtain lower scores on measures of verbal ability and to obtain lower IQ scores when the measures used have a high verbal loading. Such class differences are less marked when measures with low verbal loading such as Raven's Progressive Matrices are employed (Bernstein, 1961).

To summarise the above, results obtained in the present study which refer to father absence do not agree with those reported by other researchers. No significant differences were obtained that were associated with father absence, either permanent or intermittent. It may be that the discrepancy was due to the fact that the children examined in the previous studies were older than those examined in this study. It is possible that father absence does influence cognitive development, but that the influence does not become apparent until after the child has reached the age of 7 years. A second possibility is that when other aspects of the child's environment are

kept constant, then differences that have been attributed to father absence disappear. If this is the case then discrepancies in the results may be due to differences in the design of this study compared to earlier ones. Further research is required to determine the reason for the differences in results obtained.

In order to examine the possible reasons for the discrepancies in the results an additional investigation will be carried out. This second investigation will examine a group of children similar to those already studied in age, sex, social class and father absence experiences in order to establish whether results of the first study may be replicated with a second sample. In addition another older group of children will be studied. These children will be similar to those already studied in sex and absence experience but will be older, that is between 8 and 11 years of age. The inclusion of this older group will enable examination of the possibility that differences in cognitive development that are due to the influence of father absence do not appear until the child has past seven years of age.

Turning to the investigation of the incidence of emotional and behavioural problems exhibited by the children, results obtained from the Children's Behaviour Questionnaire for Completion by Parents will be examined first. Analysis of total scores revealed that absence of the father affected scores obtained by working class girls. No significant differences were found between boys experiencing permanent, intermittent or no father absence. Total scores obtained by working class girls in the permanent and intermittent father absence groups

were higher than those obtained by working class girls who had not experienced father absence. That is that, in the case of working class girls, mothers of those in the permanent and intermittent father absence groups reported a higher incidence of emotional and behavioural problems than did mothers of those in the no absence group. In both the permanent and intermittent absence groups the mean score obtained by the working class girls was equal to or greater than 13, the score considered to indicate the presence of behavioural or emotional disorder (Rutter, Tizard & Whitmore, 1970).

This result differs from that which was expected on the basis of findings from previous studies. In those that reported differences between children experiencing father absence and those who had not, it was boys rather than girls who were found to be most affected. This was the case both in studies of anti-social behaviour(Grygier et al, 1969; Hersov, 1960; Hoffman, 1971) and other aspects of adjustment (Lecorgne & Laosa, 1976). The number of studies investigating the association between father absence and personal adjustment in girls is not high. Two of those that have been carried out point to a higher incidence of problems in girls who have experienced father absence compared to those who have not. Koller (1971) reported that, compared to non-delinquents, delinquent females were more likely to have experienced father absence. Hersov (1960) found that females who had experienced father absence were more likely to truant than those who had not. A larger number of studies demonstrated no differences between father absent girls and those whose fathers had not been absent (Bach, 1946; Hoffman., 1971; Lecorgne & Laosa, 1976; Sears, 1951; Stolz, 1954).

Social class as a variable has not been extensively examined in the studies of father absence in girls. However, in those studies that have found a higher incidence of problems in those children who have experienced father absence, working class father absent children exhibited more behaviour problems, although this was only so for those relating to anti-social behaviour (e.g., Douglas, 1970; Gregory, 1965).

The finding that only working class girls whose father are absent, whether permanently or intermittently, obtain significantly higher scores on the Children's Behaviour Questionnaire for Completion by Parents is unexpected in the light of results of previous research. Therefore, and given the small numbers in each of the three working class female absence sub-groups, replication of the results is necessary before such a finding may be accepted.

All other results obtained from the Children's Behaviour Questionnaire for Completion by Parents demonstrate that, except for working class girls, father absence is not associated with a higher incidence of emotional and behavioural problems than is found in children who have not experienced father absence. As expected the incidence of psychiatric disorder was highest in the children of divorced parents and next highest in the children of naval families but the difference between the three absence groups was not significant. Also, when the results obtained from individual items of the scale were examined, no differences were found between the three absence groups in the incidence of bed-wetting, stealing or poor peer relationships.

Examination of total scores obtained from the Children's Behaviour Questionnaire for Completion by Teachers revealed that the only significant result that was obtained was for middle class boys. Middle class boys whose fathers were permanently absent obtained higher scores than did middle class boys whose father were intermittently or not absent. That is permanent absence of the father was associated with a report by teachers of a higher incidence of emotional and behavioural problems. This finding corresponds more closely to results reported by other researchers who have found differences between father absent and father present children than was the case with reports from the mothers. As only the boys whose fathers were permanently absent obtained higher scores than the no absence group, the finding also provides support for the assertion that it is not simply physical absence of the father that is associated with a higher incidence of problems. Rather, the circumstances preceding and accompanying the absence need to be considered (Rutter, 1972).

Two factors, however, reduce confidence in the results. Firstly the numbers are small. Because of the difficulties in obtaining the cooperation of middle class mothers who had been divorced, only two boys made up the male, middle class, permanently father absent sub-group. With only two scores it is impossible to accept this finding without replication. Secondly, no significant result was obtained in the case of working class boys. Studies that have controlled for social class have, in some cases, found differences between father absent and father present boys. However, in the case of working class

boys it appears to be the incidence of anti-social behaviour that is higher. One reason, therefore, for the absence of a significant result for working class boys in the present study might be due to their age. All children involved in the research reported here were under 8 years of age. Anti-social behaviour such as stealing or bullying may be less likely to occur at such a young age. Also, at this age the behaviour even if present may not be considered severe enough to be reported by the teacher.

Given these findings, it would be of interest to discover firstly, whether they could be replicated in the case of a further group of children similar in absence experience, age, sex and social class. Secondly, it would be worthwhile to establish whether, in the case of a group of children older than those already studied, similar results would be obtained or whether the effects of absence of the father would be more apparent amongst older children.

Comparing the results obtained from the Children's Behaviour Questionnaire for Completion by Parents and the Questionnaire for Completion by Teachers, a correlation between the two of 0.35 was obtained which was not significant. Seven children were found to obtain scores of 13 or more on the parental questionnaire as well as obtaining scores of nine or more on the teachers' questionnaire. Therefore of the 20 children obtaining high scores on either scale 35% obtained high scores on both. The proportion of children obtaining high scores on both measures in the present study was higher than that found by Rutter, Tizard and Whitmore (1970) in their epidemiological study of 2960 children. They reported that only in

one sixth of the cases in which children obtained high scores on one scale did they also obtain high scores on the other. However, as the agreement between the scales in the present study is not high and the correlation between the two is not significant, it is necessary to consider reasons for the discrepancies in the reports of teachers and parents.

One possibility that must be considered is that one or both of the scales might not be valid, but studies by Rutter (1967) and Rutter, Tizard and Whitmore (1970) have provided extensive evidence for their validity. If the scales are valid, then differences between the reports of parents and teachers referring to the same children may be due to a number of different factors and these have been considered by Rutter, Tizard and Whitmore (1970). Firstly, it may be that behaviour exhibited by the children is situation specific. That is, it may be obvious in the school environment but may not appear in the home setting. Teachers may be more inclined to note anti-social behaviour because of its disruptive effects on the rest of the class or else anti-social behaviour may be denied by the parents even though it does exist. Items may be interpreted differently by teachers and parents, or it may need a more extreme manifestation of a certain type of behaviour in order that it may be noticed by the teacher. A mother might emphasise problems if her child is causing her anxiety, or if she herself has emotional or practical problems. Therefore, results of the two scales do not need to correspond in order that both might be considered valid.

The final results to be considered here are those obtained from the mothers' responses to the Biographical and Environmental

Questionnaire. The only item of those subjected to individual analysis which yielded a significant results was that referring to the type of accommodation occupied by families. It was found that in the case of the middle class group families from which fathers were intermittently absent were less likely to own their own house than were families from which the fathers were never absent. Such a result might be due to the fact that naval personnel are expected to move to different locations when requested, either in this country or abroad. This, added to the provision by the navy of rented accommodation, might dissuade naval personnel from house purchase.

No other significant results were obtained, indicating that the three absence groups did not differ in terms of the number of schools attended by the children nor whether they were reported by their mothers to be happy at school. There was no difference between the groups in the extent to which the parents read to their children or took them on outings. In the case of the intermittent and no absence groups there was no difference in the extent to which mothers reported their husbands as taking a significant part in child rearing. Finally there was no difference between the three absence groups in the incidence of mothers being in paid employment.

One further piece of information gathered from the interviews with the mothers who were divorced was whether the children in those families still had regular contact with their fathers. It was found that amongst middle class and working class girls none still maintained regular contact. Of the two middle class boys, one maintained regular contact with his father and one did not and of the six working class

boys three maintained contact and three did not. The investigation of the incidence of emotional and behavioural problems revealed that it was middle class boys and working class girls who were affected by permanent absence of the father. As one middle class boy maintained contact with his father and one did not the maintainence of contact appeared not to be important here. It might be however that the failure of the working class girls to maintain contact with their fathers was a contributing factor in their case. Against this is the fact that middle class girls, too, had no contact with their fathers but in their case the incidence of emotional and behavioural problems was no higher than amongst other middle class girls. Therefore, whether maintainence of contact between fathers and children has any influence on the outcome of the fathers' absence needs to be investigated further.

In conclusion, the results obtained in this study differ from those reported in previous research, both in the case of the investigation of cognitive development and in the report of the incidence of emotional and behavioural problems. Three possible explanations might be advanced to explain this discrepancy. Firstly, it might be that the present study took account of important variables, sex, social class and type of father absence and controlled for others, family size and length and age of onset of absence, to a greater degree than did the earlier investigations. Consequently, the differences in results might be due to the greater methodological adequacy of this study. Secondly, it might be that the numbers employed in the present study were too small and that the absence of

significant results where they have been reported by others was due to Type II error. Finally it might be that the reason for the discrepancy might be due to the fact that in the present study the children investigated were younger than those involved in most of the earlier research.

In order to examine these possibilities further an additional investigation will be undertaken, similar in design to the first, but with the addition of a second group of children aged between 8 and 11 years of age.

CHAPTER FOUR

A SECOND INVESTIGATION OF THE EFFECTS OF FATHER ABSENCE ON COGNITIVE DEVELOPMENT, THE INCIDENCE OF EMOTIONAL AND BEHAVIOURAL PROBLEMS AND MOTHER-CHILD INTERACTION

INTRODUCTION

In Chapter One the research concerned with the investigation of the effects of father absence on child development was reviewed. The review revealed the existence of many studies that reported an association between father absence and cognitive deficits and emotional and behavioural problems in children. However, critical evaluation of the research revealed many methodological inadequacies. Among these inadequacies was the failure to take account of the significance of variables such as social class, sex of child, type and length of father absence and family size. This failure was apparent both in the design of the studies and in the conclusions drawn from the results. A further inadequacy was the frequent use of samples drawn from narrow populations such as child guidance clinic patients or convicted juvenile delinquents.

The study reported in the preceding pages examined the effect of father absence on the cognitive development and incidence of emotional and behavioural problems in a group of children aged between 5 years and 7 years. The study was designed to take account of variables in addition to father absence. Male and female children from middle class

and working class families who had experienced either permanent or intermittent father absence were examined. Length of absence and family size were controlled. In addition the sample was drawn from the whole population of the city in which the study was carried out.

The results of the study revealed no differences in cognitive development between the children that were associated with permanent or intermittent father absence. In the case of the investigation of emotional and behavioural problems mothers of girls in the working class group who had experienced permanent or intermittent father absence reported a higher incidence of emotional and behavioural problems than did mothers of working class girls who had not experienced father absence. Both of these results were in contrast to those expected from previous research. Cognitive deficits were reported in a number of studies and boys were more often found to be affected by father absence than were girls.

Only one result, obtained from teachers reports, was in the expected direction. Middle class boys who experienced permanent father absence were reported by teachers to exhibit a higher incidence of emotional and behavioural problems than were middle class boys who experienced intermittent or no father absence. Contrary to expectations, however, no differences between the three absence groups were found for the total scores obtained by working class boys.

The findings of the study, with one exception, were, therefore, in contrast to the results obtained in a number of studies described in Chapter One. The reasons for the discrepancies in the results were considered in Chapter Three. Briefly, three possibilities were

examined. Firstly, earlier studies employed inadequate controls, failed to consider the relevance of important variables other than father absence and selected samples from narrow populations. Consequently their findings were an artefact of inadequate methodology. A second possibility considered was that the results obtained in the study reported here were an example of a Type II error. That is that no differences between children were demonstrated even though they did exist, the reason for the error being the small sample size. The final possibility considered was that the age of the children accounted for the discrepancies. The children examined in the study reported in the preceding chapters were younger than those in most of the previous studies in which significant differences were found that could be attributed to father absence. It was considered possible therefore that father absence has an influence on cognitive development and is associated with emotional and behavioural problems as reported by other researchers, but that this influence does not become apparent until after those experiencing father absence have reached 7 years of age.

In order to examine these three possible explanations for discrepancies in the results between the first study and previous research a further investigation was undertaken. A second group of children aged between 5 years and 7 years was studied in order to establish whether results obtained in the first study could be replicated. In addition, a further group of children aged between 8 years and 11 years was included in order to investigate the possibility that discrepancies were due to differences in ages of the children studies.

The second study was designed to examine the cognitive development and incidence of emotional and behavioural problems in children experiencing one of two types of father absence, permanent or intermittent and to compare them with children who had not experienced father absence. Children experiencing permanent absence were drawn from families in which the parents had been divorced and children experiencing intermittent absence were drawn from families in which the fathers were serving members of the Royal Navy. Both male and female children from middle class and working class families were included in the sample.

The second investigation, in addition to examining reasons for the results obtained in the first study was also designed to examine the influence of father absence on some aspects of mother-child interaction. This was referred to briefly in the first study in that mothers were asked whether they spent time reading with their children and taking them on outings. No significant differences were obtained in the replies of mothers of children in the three absence groups.

In spite of the absence of significant differences obtained in the first study it was considered to be of interest to examine aspects of mother-child interaction in more detail in the second study. Father absence might be expected to influence interaction between mothers and children for a number of reasons. Women whose husbands are absent, whatever the reason, experience some problems in common. Depression is reported both by women experiencing permanent absence of their husbands due to divorce (Marsden, 1969) and by those experiencing intermittent absence as a result of their husbands' occupation

(Matthews, 1969; Seebohm, 1973). Loneliness and resentment are also reported by both groups of mothers (Brandwein et al, 1974; Duvall, 1945; Marsden, 1969). Both groups report anxiety about their ability to fulfill a dual parental role (Brandwein et al, 1974; Marsden, 1969; Matthews, 1969).

Women alone because of divorce report some problems that differ from those experienced by women whose husbands are intermittently absent. Freudenthal (1959), Carter and Glick (1970), Goode (1948) and Marsden (1969) found that divorced women experienced feelings of shame, anger and guilt. They tend to be stigmatised by society (Brandwein et al, 1974) and experience economic hardship particularly when they are of low socioeconomic status (Brandwein et al, 1974; Finer, 1974; Marsden, 1969; Wynn, 1964). Women experiencing intermittent absence whose husbands are in the Royal Navy report anxiety about them while they are away. They also report problems associated with the frequent moves made necessary by their husbands' occupation. In addition there are problems associated with the husband's return such as conflict of discipline techniques employed in the management of the children and the re-emergence of marital difficulties (Matthews, 1969).

The existence of the problems outlined above may have an influence on mother-child interaction in a number of ways. Anxiety because of practical problems may result in lower tolerance on the mother's part, not only of actual misdemeanours, but also of the everyday demands for attention, questioning and so on. Feelings of depression and loneliness may be communicated to the child. Anxiety about carrying out a dual parental role may result in the mother using more repressive

disciplinary techniques than would normally be the case, or else the desire to make up for the absence of the father may result in an increase in permissiveness. Also the mother without an adult companion may place greater demands on the child for fulfilment of her needs (Hoffman, 1971; Kreisberg, 1967).

It has been suggested that 'many of the effects of father absence may be explained by the differences in the mother's behaviour towards her children and not necessarily father absence per se' (Lewis & Weinraub, 1976). There is evidence that the attributes of the mother and the way she responds to the child affect the outcome of father absence for the child. For example McCord, McCord and Thurber (1962) found that in a home from which the father was absent, adolescent boys were more likely to exhibit behaviour problems such as regressive behaviur, sexual anxiety and the commiting of criminal acts in cases where the mother was judged by the researchers to be rejecting or disturbed than when she was judged well adjusted. Gabower (1960) examining why some children in military families developed behaviour problems and some did not, found that mothers of children diagnosed as having behaviour problems were more likely to report anxiety and tension between themselves and their children. Also mothers of children with behaviour problems reported more difficulties themselves than did mothers of children without behaviour problems. Pederson (1966) too examined military families and compared emotionally disturbed with non-disturbed boys. Pederson found that mothers of emotionally disturbed boys were themselves more disturbed, as demonstrated by their MMPI responses, than were mothers of boys who were not emotionally disturbed.

Evidence exists for the association of interaction between mothers and their children and the cognitive development of the children. For example Bing (1963) reported that children with high verbal ability had mothers who reported giving children more verbal stimulation in infancy and early childhood than did mothers of children with low verbal ability. Another study by Bradley and Caldwell (1976) reported an association between the IQ of children and maternal involvement and extent of verbal responsivity to those children. Wood and Middleton (1975) found differences between the way mothers interacted with their children and their effectiveness as teachers. They reported that mothers who were most successful modified their instructions in step with the way children responded to their earlier tuition. Rutter and Mittler (1972) in their review concluded that the quality of language in the home was related to the child's linguistic ability and verbal intelligence.

Social class differences in aspects of interaction associated with cognitive development have been detected. For example Henderson (1970) reported lower working class mothers as speaking oftener for affective and role defining reasons whilst middle class mothers spoke oftener for what were defined as cognitive reasons. Bernstein and Brandis (1970) reported middle class mothers as more likely than working class mothers to chatter to their children and attempt to answer difficult questions. Cook (1973) found that middle class and working class mothers differed in verbal control techniques. Middle class mothers were more likely to use personal appeals to the child, giving more information about emotions, reasons for action and were more likely to take intentions into account. She found that working class mothers

were more likely to use imperatives. Similar results have been reported by Hess and Shipman (1965), Newson and Newson (1968) and Zegiob and Forehand (1975).

One study by Hess and Shipman (1965) provided some evidence that when the father is absent social class differences such as those described above may be increased. They examined the link between social class, communication between mothers and their children and mothers' ability to teach their children cognitive tasks. Included in their sample was a group of lower socio-economic status children absent from their fathers. They studied 160 negro mothers and their 4 year old children. Mothers and children were from four different social status levels. Group A were from professional and managerial occupational levels, group B skilled blue collar, group C from unskilled and semi-skilled occupational levels and group D from homes where the father had been in unskilled or semi-skilled occupations but was now absent and the family received welfare payments. Mothers were interviewed twice in their homes and were then brought to the university for testing and for an interaction session with their children. For these sessions mothers were taught three simple tasks and were asked to teach them to their children. Task I involved sorting plastic toys by colour and function, Task II sorting blocks by two characteristics simultaneously, Task III involved mother and child working together to copy five designs.

Results indicated that in group A the amount of verbal output was 70% higher than for the other groups. Examining the type of verbal interaction it was found that group A were more likely to use personal

rather than status appeals, group D, the FA group being more likely to use status than personal appeals. Group A mothers used abstraction most, group D mothers used abstraction least. Other differences found were that working class mothers (groups B, C, and D) were more likely to use relational-contextual reasons for classifying stimuli together, eg. 'Doctor and Nurse', rather than descriptive or category reasons. A positive correlation was obtained between the use of relational contextual strategies and poor performance of the children on a similar sorting task. Middle class mothers were better teachers of their children as measured by the children's performance on the experimental tasks. They were more likely to attempt to motivate the child, establish an appropriate set, give verbal reinforcement, give specific instructions and seek a verbal response from the child. Of the working class mothers (groups B, C, and D), group D mothers, those whose husbands were absent were the least effective teachers.

Thus differences were reported to exist between status groups both in the mothers' verbal behaviour and in mother-child interaction. Mothers in group D whose husbands were absent exhibited a lower incidence of verbal behaviour and use of abstraction. Of all groups they were most likely to use imperatives and status appeals. They were the least adequate teachers as measured by their children's performance on the experimental tasks. None of the middle class mothers were absent from their husbands so it was not possible to assess the effects of such absence on the interaction between middle class mothers and their children.

Thus it may be that differences found between children, both in the incidence of emotional and behavioural problems and in cognitive development that are associated with father absence, may be due, in part to differences in interaction between mothers and their children.

Social class may influence the effect of permanent father absence on mother-child interaction. Mothers of lower socioeconomic status are more likely to suffer economic hardship and other practical problems (Brandwein et al, 1974; Wynn, 1964). It is possible that the greater the number of problems with which the mother has to deal the more her interaction with her children would suffer (Biller, 1974). Sex of child might also influence the effect of father absence on mother-child interaction. Biller (1974) considers that it is the relationship between mothers and sons which is most affected by father absence.

No studies have been carried out that have examined the relationship between father absence and interaction between mother and child that have also examined the effects of social class and sex of the children. It was decided to carry out such a study and investigate whether any differences found could be related to differences in cognitive development and the incidence of emotional and behavioural problems.

The second investigation therefore, had two aims. The first was to examine reasons for discrepancies between the results of the first study and those obtained in earlier research. The second aim was to examine the association between father absence and interaction between mothers and their children, also examining social class and sex of child.

The cognitive development of the children was assessed using the Wechsler Intelligence Scale for Children (WISC). In the light of the findings of the first study it was expected that father absence would have no effect on the WISC scores of children aged between 5 years and 7 years. On the basis of results from previous research it was expected that father absence would have an effect on the WISC scores of children aged between 8 years and 11 years (Lessing et al, 1970).

In the older group it was predicted that children experiencing either permanent or intermittent father absence would obtain lower IQ scores and lower sub-tests scores on the WISC than would children whose fathers were not absent. Also interactions were predicted, in the case of the older sample, between father absence and social class and father absence and sex of child. It was expected that working class children would be more affected by father absence than would middle class children (Lessing et al, 1970). It was also expected that boys would be more affected by father absence than would girls (Hillenbrand, 1971; Santrock, 1972). In all cases it was expected that scores of children experiencing permanent father absence would be lower than those of children whose fathers were intermittently absent.

The incidence of emotional and behavioural problems exhibited by the children was assessed using the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) (Rutter, Tizard & Whitmore, 1970) and the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2) (Rutter, 1967). Considering first children aged between 5 years and 7 years, in the light of the

findings of the first study it was expected that intermittent and permanent father absence would have an effect on the incidence of emotional and behaviour problems reported by mothers of working class girls. Also it was expected that permanent father absence would have an effect on the incidence of emotional and behaviour problems reported by the teachers of middle class boys.

In the older group, on the basis of previous research, it was expected that the incidence of emotional and behavioural problems would be highest in those children whose fathers were permanently absent and that those children experiencing intermittent absence would exhibit a higher incidence of problems than children experiencing no absence. It was also predicted that the number of children classified as suffering from a psychiatric disorder, according to their scores on the questionnaires, would be highest in the permanent father absence group and lowest in the no absence group.

Interactions between father absence and sex of child were expected. It was predicted that boys experiencing father absence would be more affected by that absence than would girls (Biller, 1974). Also interactions between father absence and social class were expected. It was predicted that working class children would be more affected by absence than would middle class children (Biller, 1974; Cobliner, 1963; Douglas, 1970). Finally, in the case of the three specific problems considered separately, it was expected that the incidence of bed-wetting would be lower in the intermittent absence group than in the permanent or no absence groups (Matthews, 1969). Secondly it was

expected that the incidence of poor peer relationships would be higher in the two father absence groups (Stolz et al, 1954; Tiller, 1958). Thirdly it was expected that the incidence of stealing would be higher in the permanent absence group than in the intermittent or no father absence group (Douglas, 1970; Gibson, 1969).

Mother-child interaction was investigated using the Index of Communication and Control (Brandis & Henderson, 1970). It was expected that father absence would have an effect on mother-child interaction (Hess & Shipman, 1965). Interactions were expected between social class and father absence. It was predicted that father absence would effect interaction in the working class group to a greater extent than in the middle class group (Biller, 1974). Interactions were also expected between sex of child and father absence. It was expected that mother-child interaction would be most affected by absence in the case of boys (Biller, 1974).

METHOD

Design

Social class, middle and working class, sex of child and type of father absence, permanent, intermittent and no absence were manipulated in a 2 x 2 x 3 factorial design. There were, therefore, 12 independent groups of subjects. In the investigation of cognitive development a fourth factor, employing repeated measures, was added. In the analysis of IQ scores this was a three level factor, Full Scale, Verbal Scale and Performance Scale IQ. In the analysis of

verbal and performance sub-tests the factor had five levels, one for each sub-test.

Subjects

There were two groups of subjects, 52 children aged between 5 years and 0 months and 7 years 11 months, mean age 6 years, 6 months; and 54 children aged between 8 years 0 months and 11 years 4 months, mean age 9 years, 7 months. Both male and female children from middle class and working class families were included in both age levels. Within each age level there were three groups. Firstly there were children whose fathers were intermittently absent due to their being members of the Royal Navy. Secondly there were children whose fathers were permanently absent due to parental divorce. Thirdly there were children whose fathers were present. The numbers of children in each type of father absence - social class - sex of child cell and the mean ages of children in each cell for each age level may be found in Table 4.1 and Table 4.2.

Table 4.1

The numbers of children aged between five and seven years in each type of father absence - social class - sex of child cell and the mean ages of children in each cell

		Intermittent Absence Group		Permanent Absence Group		No Absence Group	
		Number	Mean Age	Number	Mean Age	Number	Mean Age
Male	Middle Class	5	6yrs 0mths	3	6yrs 3mths	5	6yrs 4mths
	Working Class	5	6yrs 9mths	5	6yrs 0mths	4	6yrs 2mths
Female	Middle Class	5	6yrs 7mths	3	6yrs 7mths	4	6yrs 4mths
	Working Class	5	6yrs 10mths	4	6yrs 6mths	4	6yrs 0mths

Total number of subjects = 52. Mean age = 6 years 6 months.

Table 4.2

The numbers of children aged between eight and eleven years in each type of father absence - social class - sex of child cell and the mean ages of children in each cell

		Intermittent Absence Group		Permanent Absence Group		No Absence Group	
		Number	Mean Age	Number	Mean Age	Number	Mean Age
Male	Middle Class	5	9yrs 9mths	3	8yrs 4mths	5	9yrs 10mths
	Working Class	5	8yrs 7mths	5	8yrs 9mths	5	10yrs 0mths
Female	Middle Class	5	10yrs 5mths	3	9yrs 6mths	5	9yrs 6mths
	Working Class	5	10yrs 2mths	3	10yrs 0mths	5	10yrs 0mths

Total number of subjects = 54. Mean age = 9 years 7 months.

Materials

(a) Wechsler Intelligence Scale for Children (WISC)

The cognitive development of the children was assessed using the WISC. This is an intelligence scale for children aged from 5 years to 15 years 11 months. A detailed description of the scale may be found in Chapter Two.

(b) A Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

The incidence of emotional and behavioural problems exhibited by the children as reported by the mother was assessed using the Children's Behaviour Questionnaire for Completion by Parents. This is a questionnaire completed by parents comprising three sections. The first is a section on health problems, the second a section on habits and the third listing a series of descriptions of behaviour.
A detailed description of the scale may be found in Chapter Two and a copy of the scale may be found in Appendix 2.

(c) A Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

The incidence of emotional and behavioural problems exhibited by the children as reported by their class teachers was assessed using the Children's Behaviour Questionnaire for Completion by Teachers. This is a questionnaire completed by teachers consisting of 26 items which are descriptions of behaviour. A detailed description of the scale may be found in Chapter Two and a copy of the scale may be found in Appendix 2.

(d) Index of Communication and Control

This index was designed as a measure of the mother's orientation towards communication with and control of her child (Brandis & Henderson, 1970). It consists of four schedules, Schedule D, Schedule E, Schedule F and the Control Questionnaire, the details of which may be found in Appendix 2.

(i) Schedule D. Schedule D samples the function that toys may be thought to perform. Mothers are asked to rank six functions in order of importance. Examples of these functions are 'To keep children amused by themselves', 'To help them when they go to school'.

(ii) Schedule E. Schedule E samples the universe of responses available to the mother when the child asks difficult questions. Five alternatives are offered and mothers are asked to indicate whether they never, sometimes or often use each alternative. Examples of the alternatives are 'Try to change the subject', 'Tell him/her as much as you can'.

(iii) Schedule F. Schedule F samples the situations in which interaction with the child is not a defining activity, but could emerge because the child applies to initiate it. Seven situations are listed and mothers are asked what they would do in each of these if the child were chattering to them. Examples of the situations are 'You are in a shop', 'At meal times'. The mother is asked which of four alternatives she would use in each situation. The alternatives are Tell him/her to stop, Tell him/her quickly, talk to him/her quickly or chat to him/her.

(iv) Control Questionnaire. The control questionnaire samples behavioural problem situations initiated by the child and asks mothers

to relate what their response to the child might be. An example of such a situation is the child spilling tea on the table through inattention.

(e) Biographical and Environmental Questionnaire

This was designed to obtain biographical details about the children and information about their environment and interaction with their parents. The questionnaire was the same as that employed in the first study but with the addition of a question asking mothers experiencing permanent or intermittent absence of their husbands to report any emotional and practical problems they experienced as a result of that absence. A copy of the questionnaire may be found in Appendix 2.

Procedure

(a) Procedure used to obtain subjects

(i) Intermittent Absence Group. Random samples were drawn from lists of accommodation addresses of both officers and other ranks provided by the Royal Navy. A letter and questionnaire were sent to each address. Copies of these may be found in Appendix 1. Those questionnaires returned that indicated the presence of two or three children one of whom was in the required age group were retained.

(ii) Permanent Absence Group. Names and addresses of divorced women were obtained from the local newspaper. Letters and questionnaires identical to those sent to the naval addresses were forwarded to them. Those questionnaires that indicated the presence

of two or three children one of whom was in the required age group were retained.

(iii) No Absence Group. Random samples of names and addresses were obtained from the electoral register. As far as possible names were selected from the same areas as the naval sample. Letters and questionnaires were sent as in the case of the other two groups. Those who replied were included in the sample if they had either two or three children one of whom was in the required age group.

Those families whose questionnaires were retained were contacted and arrangements were made for the researcher to visit the home to interview the mother. A more detailed description of the procedure used to obtain subjects may be found in Chapter Two. As a result of this procedure 52 children aged between 5 years and 7 years and 54 children aged between 8 years and 11 years were obtained.

(b) Procedure of the study

Mothers were interviewed at home. During the course of the interview the researcher completed the Biographical and Environmental Questionnaire and the Index of Communication and Control. The procedure for the completion of the Children's Behaviour Questionnaire for Completion by Parents was explained and mothers were asked to complete the questionnaire either while the researcher was present or later if they wished. In the latter case a reply paid envelope was provided for the questionnaire's return. Finally the mothers were asked to sign a form agreeing that their children should be tested in school and that the class teacher should complete the Children's Behaviour Questionnaire for Completion by Teachers.

Children were seen at school, in almost all cases approximately one week after the interview with the mother. Testing the children took 45 minutes. At the same time as the children were tested the class teachers were approached and asked to complete the behaviour questionnaire. A reply paid envelope was provided for its return.

A more detailed account of the procedure may be found in Chapter Two, page 78 .

Procedure for Scoring the Index of Communication and Control

The Index of Communication and Control consisted of four schedules and each was scored differently.

(i) Schedule D. Schedule D samples the functions that toys may be thought to perform. Mothers are asked to rank six functions in order of importance. Examples of these functions are 'To keep children amused by themselves', 'To help them when they go to school'. The schedule is scored by counting the number of independent rank deviations from item C ranked first plus F and D ranked fifth and sixth, irrespective of order. The highest number of such deviations is 11, reached when C is ranked fifth and F and D ranked first and second (Brandis & Henderson, 1970). A modification was made to the scoring in the present study such that no deviation was scored 11 and one point was taken off for each deviation.

(ii) Schedule E. Schedule E examines the use of responses available to the mother when the child asks difficult questions. Five alternatives are offered and mothers are asked to indicate whether they never, sometimes or often use each alternative. Examples

of the alternatives are 'Try to change the subject', 'Tell him/her as much as you can'. For each item a response of never is scored one, sometimes is scored two and often is scored three. An avoidance index is obtained by adding the score of item three to twice the score of item four and subtracting the scores of items one, two and five. The higher the score obtained the lower is the avoidance exhibited by the mother in answering difficult questions.

(iii) Schedule F. Schedule F samples the situations in which interaction with the child is not a defining activity, but could emerge because the child applies to initiate it. Seven situations are listed and mothers are asked what they would do in each of these if the child were chattering to them. Examples of the situations are 'You are in a shop', 'At meal times'. The mother is asked which of four alternatives they would use in each situation. The alternatives are Tell him/her to stop, Tell him/her quickly, talk to him/her quickly or chat to him/her. The first alternative is scored one, the second two, the third three and the fourth four. The total score over all items is added. The higher the score obtained by the mothers the greater is the likelihood that they will chat with their children.

(iv) Control Questionnaire. The control questionnaire samples behavioural problem situations initiated by the child and asks mothers to relate what their response to the child might be. An example of such a situation is the child spilling tea on the table through inattention. The scoring method used by Brandis and Henderson (1970) was very complex, enabling detailed coding of the mothers' responses. It was decided in the present study to employ an abbreviated coding

technique and simply assess which of three control strategies, avoidance, punishment or support was used by the mother in each situation. The number of times mothers used each strategy over the six situations was counted.

CHAPTER FIVE

COGNITIVE DEVELOPMENT

The cognitive development of the children was assessed using the WISC. Measures of Full Scale, Verbal Scale and Performance Scale IQs were calculated in addition to the scores on the ten sub-tests. In the WISC sub-tests one to five are classified as verbal. These are General Information, Comprehension, Arithmetic, Similarities and Vocabulary. Sub-tests six to ten are classified as performance. These are Picture Completion, Picture Arrangement, Block Design, Object Assembly and Coding.

In this, the second study, 52 children aged between 5 and 7 years and 54 children aged between 8 and 11 years were examined.

1. The Results of the Investigation of Children Aged Between Five and Seven Years

(a) Examination of Full Scale, Verbal Scale and Performance Scale IQ Scores

IQ scores obtained by the children may be found in Appendix 3.2.1. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each IQ scale may be found in Table 5.1. A four-way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child;

Table 5.1

Means and Standard Deviations of IQ scores obtained by children aged between five and seven years experiencing intermittent, permanent or no father absence on the Full Scale, Verbal Scale and Performance Scale of the WISC

IQ SCORE		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	4	5	3	4	5	4	4	52
Full Scale	Mean	115.00	113.33	119.20	105.60	98.00	110.25	119.00	112.00	122.75	96.40	103.25	100.50	110.15
	S.D.	15.73	9.07	12.87	11.55	14.98	8.42	5.15	13.08	4.57	18.60	8.22	9.88	14.20
Verbal Scale	Mean	109.40	111.67	121.60	95.80	89.20	105.75	115.80	125.00	115.25	91.00	99.25	99.25	105.50
	S.D.	19.62	3.06	10.88	14.60	18.10	12.76	9.88	10.58	7.09	19.69	6.40	7.46	16.81
Performance Scale	Mean	118.00	111.67	112.60	115.00	108.00	114.00	119.60	114.67	126.75	103.40	107.50	106.00	113.06
	S.D.	10.75	24.85	14.22	6.52	11.25	4.97	2.88	14.64	5.32	17.57	9.47	8.76	12.19

S.D. = Standard Deviation

social class, middle class and working class and IQ scale, Full, Verbal and Performance, with a repeated measure on the last factor. Since the cell frequencies for the father absence-sex-social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant interactions may be found in Table 5.2. A complete table of the results of this analysis may be found in Appendix 4.2.1.

Main effects: Overall there was no effect due to father absence (F =<1, d.f. = 2,40, p > .05).

A significant main effect of social class was obtained (F = 21.12, d.f. = 1,40, p < .01). Middle class children obtained higher scores over all three IQ measures, Full Scale, Verbal Scale and Performance Scale than did working class children.

A further significant main effect of IQ score was obtained (F = 15.22, d.f. = 2,80, p < .01). Verbal Scale IQ scores were lower than Full Scale IQ scores which in turn were lower than Performance Scale IQ scores.

Interaction between social class and IQ score: There was a significant interaction between social class and IQ score (F = 12.21, d.f. = 2,80, p < .01). An analysis of simple main effects of social class for each of the three IQ scales yielded significant results in the case of Full Scale IQ (F = 21.56, d.f. = 1,40, p < .01); Verbal Scale IQ (F = 28.82, d.f. = 1,40, p < .01) and Performance Scale IQ (F = 6.15, d.f. = 1,40, p < .025). A table of the results of this

Table 5.2

A summary of the analysis of variance of IQ scores obtained by children aged between five and seven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	10.05	1	10.05	< 1	n.s.
Social Class (B)	8422.73	1	8422.73	21.12	.01
Type of Father Absence (C)	494.91	2	247.46	< 1	n.s.
Subjects within groups	15953.74	40	398.84		
IQ Scale (D)	1198.54	2	599.27	15.22	.01
B x D	961.70	2	480.85	12.21	.01
A x C x D	561.07	4	140.27	3.56	.025
Subjects within groups x D	3149.86	80	39.37		

analysis may be found in Appendix 5.1.1. Middle class children obtained higher scores on all three scales but the difference between the two social classes was highest for Verbal IQ and lowest for Performance IQ.

Interaction between type of father absence, sex of child and IQ score: Type of father absence did interact with sex of child and IQ score (F = 3.56, d.f. = 4,80, p < .025). An analysis of simple

main effects of father absence for males and females scores on each IQ scale was carried out and the results are shown in Table 5.3. No significant simple main effects of father absence were obtained. A further analysis of simple main effects of sex of child was carried out and the results of this analysis may be found in Appendix 5.1.2. There were no significant simple main effects of sex of child. Finally an analysis of simple main effects of IQ score was carried out. The results of this analysis may be found in Appendix 5.1.3. Significant results were obtained for males experiencing intermittent absence (F = 12.83, d.f. = 2,16, p < .01) and for females experiencing no father absence (F = 16.02, d.f. = 2,12, p < .01). Examination of the scores revealed that in both cases the Verbal Scale IQ was substantially lower than the Performance Scale IQ. The Full Scale IQ is derived from these two and as expected the Full Scale IQ score fell between the Verbal and Performance scores. A comparison of the means of the Verbal and Performance Scale IQ scores produced significant results for males experiencing intermittent absence (F = 18.32, d.f. = 1,16, p < .01) and for females experiencing no absence (F = 21.40, d.f. = 1,12, p < .01). That is the Verbal IQ score obtained by boys experiencing intermittent father absence and girls experiencing no father absence was significantly lower than the Performance IQ score.

(b) Examination of Verbal Sub-Tests Scores

Verbal sub-tests scores obtained by the children may be found in Appendix 3.2.2. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard

Table 5.3

The Results of the Analysis of Simple Main Effects of type of Father Absence on IQ scores obtained by male and female children aged between five and seven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Father Absence Males, Full Scale IQ	343.66	2	171.83	1.12	n.s.
Type of Father Absence Females, Full Scale IQ	113.47	2	56.74	< 1	n.s.
Subjects within groups x Full Scale IQ	6124.45	40	153.11		
Type of Father Absence Males, Verbal Scale IQ	844.57	2	422.29	2.33	n.s.
Type of Father Absence Females, Verbal Scale IQ	353.89	2	176.95	< 1	n.s.
Subjects within groups x Verbal Scale IQ	7442.47	40	181.52		
Type of Father Absence Males, Performance Scale IQ	186.05	2	93.03	< 1	n.s.
Type of Father Absence Females, Performance Scale IQ	144.90	2	72.45	< 1	n.s.
Subjects within groups x Performance Scale IQ	5536.68	40	138.42		

Table 5.4

Means and Standard Deviations of scores obtained by children aged between five and seven years experiencing intermittent, permanent or no father absence on the five verbal sub-tests of the WISC

Verbal Sub-Tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	4	5	3	4	5	4	4	52
General Information	Mean	10.00	13.00	11.40	7.00	6.20	8.75	11.00	14.33	12.00	7.20	7.75	7.00	9.38
	S.D.	3.67	3.61	3.05	2.24	1.79	1.89	2.74	0.58	1.63	3.27	1.71	1.41	3.34
Comprehension	Mean	10.00	9.67	16.20	8.40	8.20	12.75	12.40	14.00	13.25	6.60	10.75	9.00	10.83
	S.D.	5.20	3.21	2.49	6.07	4.55	2.87	4.67	5.00	0.96	3.51	1.71	3.16	4.50
Arithmetic	Mean	14.00	10.00	12.80	10.20	9.20	12.50	15.40	15.33	14.75	9.60	10.00	11.00	12.02
	S.D.	2.92	0.00	2.95	1.10	3.49	2.52	1.52	2.08	2.22	2.70	1.63	2.58	3.11
Similarities	Mean	10.60	13.00	11.40	9.80	8.60	8.75	11.60	11.00	9.75	10.40	9.75	8.25	10.19
	S.D.	3.44	2.00	2.97	2.39	3.44	1.50	1.34	1.00	2.75	4.04	2.99	0.96	2.72
Vocabulary	Mean	13.00	13.67	15.40	11.20	9.40	11.75	12.00	15.00	12.25	9.00	11.00	11.00	11.92
	S.D.	2.92	2.89	1.14	3.19	4.51	4.65	2.55	2.65	1.71	4.18	1.41	3.37	3.40

S.D. = Standard Deviation

deviations of each sub-test may be found in Table 5.4. A four-way analysis of variance was carried out on the scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child' social class, middle class and working class and sub-test, one level for each of the five sub-tests, with repeated measures on the last factor. Since the cell frequencies for the father absence - sex - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of the analysis showing main effects and significant interactions may be found in Table 5.5. A complete table of the results of this analysis may be found in Appendix 4.2.2.

Main effects: Overall there was no effect due to father absence ($F = 1.07$, d.f. = 2,40, $p > .05$).

A significant main effect of social class was obtained ($F = 24.68$, d.f. = 1,40, $p < .01$). Middle class children obtained higher scores over all verbal sub-tests than did working class children.

A further significant main effect of sub-test was obtained ($F = 3.28$, d.f. = 4,160, $p < .025$).

Interaction between father absence and verbal sub-test score: Type of father absence interacted with verbal sub-test scores ($F = 3.65$, d.f. = 8,160, $p < .01$). An analysis of simple main effects of father absence was carried out and the results are shown in Table 5.6. No significant effects were obtained. That is there was no difference between children experiencing intermittent, permanent or

Table 5.5

A summary of the analysis of variance of scores obtained by children aged between five and seven years on the verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	0.04	1	0.04	< 1	n.s.
Social Class (B)	576.89	1	576.89	24.68	.01
Type of Father Absence (C)	49.99	2	24.99	1.07	n.s.
Subjects within groups	934.85	40	23.37		
Verbal Sub-test (D)	72.27	4	18.11	3.28	.025
A x D	60.85	4	15.21	2.75	.05
B x D	63.18	4	15.80	2.86	.025
C x D	161.39	8	20.17	3.65	.01
Subjects within groups x D	884.62	160	5.53		

Table 5.6

The results of analysis of simple main effects of type of Father Absence on the scores obtained by children aged between five and seven years on the verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, General Information	19.93	2	9.97	1.55	n.s.
Subjects within groups x General Information	256.97	40	6.42		
Type of Absence, Comprehension	101.59	2	50.80	3.19	n.s.
Subjects within groups x Comprehension	636.12	40	15.90		
Type of Absence, Arithmetic	23.61	2	11.81	2.04	n.s.
Subjects within groups x Arithmetic	231.22	40	5.78		
Type of Absence, Similarities	12.47	2	6.24	< 1	n.s.
Subjects within groups x Similarities	293.80	40	7.35		
Type of Absence, Vocabulary	53.75	2	26.88	2.68	n.s.
Subjects within groups x Vocabulary	401.37	40	10.03		

no father absence in the scores they obtained on the individual verbal sub-tests of the WISC. The pattern of scores did differ for each absence group and each sub-test. In the General Information, Comprehension and Vocabulary sub-tests the no absence group obtained the highest score and the intermittent absence group the lowest. In the Arithmetic sub-test the no absence group obtained the highest score and the permanent absence group the lowest. Finally in the Similarities sub-test the intermittent absence group obtained the highest score and the no absence group the lowest.

Interaction between social class and verbal sub-test score: Social class interacted with verbal sub-test ($F = 2.86$, d.f. = 4,160, $p < .05$). An analysis of simple main effects of social class was carried out and the results of this analysis may be found in Appendix 5.1.4. A significant effect was found for all five verbal sub-tests. Middle class children obtained higher scores than did working class children. The magnitude of the difference between the social classes differed however. It was greatest for General Information, then Comprehension, Arithmetic, Vocabulary and the smallest difference was in the Similarities sub-test.

Sex of child also interacted with sub-test ($F = 2.75$, d.f. = 4,160, $p < .05$). An analysis of simple main effects of sex of child was carried out for each verbal sub-test. The results of this analysis may be found in Appendix 5.1.5. No significant results were obtained. That is when individual verbal sub-tests were examined there was no difference between the scores obtained by males and females.

Table 5.7

Means and Standard Deviations of scores obtained by children aged between five and seven years experiencing intermittent, permanent or no father absence on the five performance sub-tests of the WISC

Performance Sub-tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	4	5	3	4	5	4	4	52
Picture Completion	Mean	11.60	13.00	11.80	12.60	11.00	11.50	12.40	10.67	11.75	9.80	11.25	11.50	11.56
	S.D.	1.95	1.00	2.49	2.51	1.58	3.70	0.89	1.53	1.71	2.17	1.71	3.42	2.14
Picture Arrangement	Mean	13.60	11.33	13.20	12.00	11.80	13.25	14.20	10.67	13.75	12.00	11.50	10.75	12.44
	S.D.	4.39	2.52	2.68	2.55	2.17	0.50	1.10	2.89	1.50	3.87	2.38	3.30	2.69
Block Design	Mean	11.40	11.67	12.00	13.60	11.00	13.25	12.20	13.67	16.00	11.60	10.75	11.75	12.35
	S.D.	3.13	5.86	3.08	3.78	2.83	1.26	0.84	1.53	1.41	3.78	3.40	1.89	2.99
Picture Assembly	Mean	14.60	11.00	11.00	12.00	12.00	10.25	13.60	13.33	12.50	8.80	10.25	10.25	11.65
	S.D.	3.58	5.29	4.00	1.58	3.16	1.71	1.95	1.53	3.70	2.39	3.10	1.71	3.11
Coding	Mean	11.80	11.33	11.00	10.60	9.80	11.75	11.40	12.00	15.25	10.60	11.50	10.00	11.35
	S.D.	3.27	4.51	2.12	3.21	1.92	2.50	2.19	4.36	3.20	1.82	2.08	2.58	2.80

S.D. = Standard Deviation

The pattern of scores obtained by males and females differed. Males obtained higher mean scores than females on Comprehension, Similarities and Vocabulary, whilst females obtained higher mean scores than males on Arithmetic and General Information. None of the differences was large enough to be significant.

(c) Examination of Performance Sub-Tests Scores

Scores obtained by children on the Performance sub-tests of the WISC may be found in Appendix 3.2.3. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each sub-test may be found in Table 5.7. A four-way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class, middle class and working class and sub-test, with one level for each of the five sub-tests. The last factor was a repeated measures factor. Since the cell frequencies for the type of father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments. A summary of the results of this analysis showing main effects may be found in Table 5.8. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.2.3.

Main effects: Overall, there was no effect due to type of father absence ($F = <1$, d.f. = 2,40; $p > .05$) and this factor did not interact with any other factor.

Table 5.8

A summary of the analysis of variance of scores obtained by children aged between five and seven years on the performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	0.07	1	0.07	<1	n.s.
Social Class (B)	85.56	1	85.56	6.16	.025
Type of Father Absence (C)	20.32	2	10.16	<1	n.s.
Subjects within groups	555.44	40	13.89		
Performance sub-tests (D)	43.00	4	10.75	1.69	n.s.
Subjects within groups x D	961.58	160	6.01		

One significant main effect due to social class was obtained (F = 6.16, d.f. = 1,40, p < .025). Middle class children obtained higher scores over all the performance sub-tests than did working class children.

A summary of the results of the investigation of cognitive development obtained from children aged between five and seven years

A. Differences between the intermittent, permanent and no father absence groups:

1. There were no differences found in IQ scores, verbal sub-tests scores or performance sub-tests scores between children experiencing intermittent, permanent or no father absence.

B. Differences within the intermittent, permanent and no father absence groups:

1. Males experiencing intermittent father absence and females experiencing no father absence obtained Verbal IQ scores significantly lower than Performance IQ score.

C. Other results:

1. Middle class children obtained significantly higher scores than did working class children on the Full Scale, Verbal Scale and Performance Scale of the WISC.

2. Middle class children obtained significantly higher scores than did working class children on all five verbal sub-tests of the WISC.

3. Middle class children obtained significantly higher scores than did working class children over all the performance sub-tests of the WISC.

4. Males obtained higher mean scores than females on the Comprehension, Similarities and Vocabulary sub-tests, whilst females obtained higher scores than males on Arithmetic and General Information. None of these differences were large enough to be significant.

2. The Results of the Investigation of Children Aged Between Eight and Eleven Years

(a) Examination of Full Scale, Verbal Scale and Performance Scale IQ Scores

IQ scores obtained by the children may be found in Appendix 3.3.1. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each IQ scale may be found in Table 5.9. A four-way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class, middle class and working class and IQ scale, Full, Verbal and Performance, with a repeated measure on the last factor. Since the cell frequencies for the father absence - sex - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant interactions may be found in Table 5.10. A complete table of the results of this analysis may be found in Appendix 4.3.1.

Main effects: Overall there was no effect due to type of father absence ($F = <1$, d.f. = 2,42, $p > .05$). No main effects due to social class, sex of child or IQ score were obtained.

Interactions between sex of child and social class and sex of child, social class and type of father absence: There was a significant interaction between sex of child and social class ($F = 4.12$, d.f. = 1,42,

Table 5.9

Means and Standard Deviations of IQ scores obtained by children aged between eight and eleven years experiencing intermittent, permanent or no father absence on the Full Scale, Verbal Scale and Performance Scale of the WISC

IQ SCORE		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	5	5	3	5	5	3	5	54
Full Scale	Mean	112.00	108.67	108.40	105.60	124.00	113.80	108.80	117.00	117.00	115.00	98.67	102.20	111.24
	S.D.	6.44	4.73	13.37	17.74	12.81	14.97	9.60	5.20	13.69	3.53	15.95	8.58	12.35
Verbal Scale	Mean	117.00	107.33	108.00	99.60	113.20	112.40	113.80	111.33	118.00	107.60	95.00	99.00	108.96
	S.D.	14.39	4.93	6.96	16.67	10.03	14.22	11.80	6.51	11.85	6.07	16.09	1.87	12.16
Performance Scale	Mean	104.20	111.33	107.20	110.60	129.00	112.80	101.60	118.00	112.40	120.20	100.67	104.80	111.20
	S.D.	4.60	2.89	18.89	18.01	13.44	14.60	6.66	10.00	16.59	6.06	13.50	15.11	14.27

S.D. = Standard Deviation

Table 5.10

A summary of the analysis of variance of IQ scores obtained by children aged between eight and eleven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	233.22	1	233.22	< 1	n.s.
Social Class (B)	169.39	1	169.39	< 1	n.s.
Type of Father Absence (C)	78.01	2	39.01	< 1	n.s.
A x B	1489.70	1	1489.70	4.12	.05
A x B x C	3068.97	2	1534.49	4.25	.025
Subjects within groups	15179.2	42	361.41		
IQ Score (D)	212.21	2	106.11	2.81	n.s.
B x D	930.93	2	465.46	12.30	.01
B x C x D	497.09	4	124.27	3.29	.025
Subjects within groups x D	3178.00	84	37.83		

$p < .05$) and sex of child and social class also interacted with type of father absence ($F = 4.25$, d.f. = 2,42; $p < .025$). An analysis of simple main effects of type of father absence was carried out for each combination of levels of the social class and sex factors. The results of this analysis are shown in Table 5.11. No significant results were

Table 5.11

The results of the analysis of simple main effects of type of absence on IQ scores obtained by children aged between eight and eleven years

Source	S.S.	d.f.	M.S.	F	Significance level
Type of absence, Middle Class Boys	66.90	2	33.45	< 1	n.s.
Type of Absence, Working Class Boys	1804.35	2	902.18	2.50	n.s.
Type of Absence, Middle Class Girls	460.69	2	245.35	< 1	n.s.
Type of Absence, Working Class Girls	1828.01	2	914.01	2.53	n.s.
Subjects within groups	15179.20	42	361.41		

obtained. Two further analyses of simple main effects were carried out, one for sex of child for each combination of levels of the absence and social class factors, and the other for social class for each level of the sex of child and absence factors. The results of these analyses may be found in Appendix 5.1.6. and Appendix 5.1.7.

A significant effect of sex of child was obtained for working class children experiencing permanent father absence (F = 10.21, d.f. = 1,42, p < .01). Males obtained significantly higher scores over all three

IQ measures than did females. That is amongst working class children experiencing permanent father absence males obtained significantly higher scores over all three IQ measures, Full Scale, Verbal Scale and Performance Scale, than did females.

A significant effect of social class was obtained for girls experiencing permanent father absence ($F = 5.34$, d.f. = 1,42, $p < .025$). Middle class girls whose fathers were permanently absent obtained higher scores over all three IQ scales than did working class girls experiencing permanent father absence.

Interaction between social class and IQ score and interaction between social class, IQ score and type of father absence: There was a significant interaction between social class and IQ score ($F = 12.30$, d.f. = 2,84, $p < .01$) and social class and IQ score interacted with type of father absence ($F = 3.29$, d.f. = 4,84, $p < .025$). An analysis of simple main effects of father absence was carried out for each combination of levels of the social class and IQ scale factor. The results of this analysis are shown in Table 5.12. No significant results were obtained.

An analysis of simple main effects of IQ score was carried out and significant results were obtained for middle class children experiencing intermittent absence ($F = 7.08$, d.f. = 2,16, $p < .01$), for working class children experiencing intermittent absence ($F = 5.41$, d.f. = 2,16, $p < .025$) and for working class children experiencing permanent father absence ($F = 11.40$, d.f. = 2,12, $p < .01$). The results of this analysis may be found in Appendix 5.1.8. In each case comparisons were made between Verbal and Performance IQ scores. Middle

Table 5.12

The results of the analysis of simple main effects of type of father absence on scores obtained by children aged between eight and eleven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, Middle Class, Full Scale IQ	32.11	2	16.06	< 1	n.s.
Type of Absence, Working Class, Full Scale IQ	49.96	2	24.98	< 1	n.s.
Subjects within groups x Full Scale IQ	5764.13	42	137.24		
Type of Absence, Middle Class, Verbal IQ	160.22	2	80.11	< 1	n.s.
Type of Absence, Working Class, Verbal IQ	20.63	2	10.37	< 1	n.s.
Subjects within groups x Verbal IQ	5276.53	42	125.63		
Type of Absence, Middle Class, Performance IQ	599.16	2	298.58	1.71	n.s.
Type of Absence, Working Class, Performance IQ	233.60	2	116.80	< 1	n.s.
Subjects within groups x Performance IQ	7316.53	42	174.20		

class children experiencing intermittent father absence obtained Verbal IQ scores significantly higher than Performance IQ scores (F = 13.97, d.f. = 1,16, p < .01). Working class children experiencing intermittent absence obtained Performance IQ scores significantly higher than Verbal IQ scores (F = 10.77, d.f. = 1,16, p < .01) as did working class children experiencing permanent father absence (F = 21.92, d.f. = 1,12, p < .01).

A further analysis of the simple main effects of social class was carried out and the results of this analysis may be found in Appendix 5.1.9. A significant effect was obtained for children experiencing intermittent father absence in their Verbal IQ scores (F = 4.75, d.f. = 1,42, p < .05). Amongst children experiencing intermittent father absence, middle class children obtained higher Verbal IQ scores than did working class children.

Examination of IQ scores revealed that for Verbal IQ scores the effect of social class was ordinal, in that middle class children obtained higher scores than did working class children in all three absence groups (Keppel, 1973, p.204). The simple main effects of social class for Verbal IQ over all three absence groups was calculated and a significant result was obtained (F = 6.73, d.f. = 1,42, p < .025). That is middle class children obtained significantly higher scores on the Verbal IQ scale of the WISC than did working class children.

(b) Examination of Verbal Sub-Tests Scores

Verbal sub-tests scores obtained by the children may be found in Appendix 3.3.2. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard

deviations of each sub-test may be found in Table 5.13. A four-way analysis of variance was carried out on the scores. The four factors were type of father absence, intermittent, permanent and no absence; sex of child; social class, middle class and working class and sub-test, one level for each of the five sub-tests, with repeated measures on the last factor. Since the cell frequencies for the father absence - sex - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant interactions may be found in Table 5.14. A complete table of the results of the analysis may be found in Appendix 4.3.2.

Main effects: Overall there was no effect of type of father absence ($F = <1$, d.f. = 2,42; $p > .05$). Significant main effects were obtained for social class ($F = 5.03$, d.f. = 1,42, $p < .05$) and sub-test ($F = 18.04$, d.f. = 4,168; $p < .01$).

Interaction between sex of child, social class and type of father absence: A significant three-way interaction between sex, social class and type of father absence was also obtained ($F = 3.31$, d.f. = 2,42; $p < .05$). An analysis of simple main effects of type of father absence was carried out and no significant simple main effects were obtained. The results of this analysis are shown in Table 5.15. Analyses of the simple main effects of social class and sex of child were also performed and the results of these may be found in Appendix 5.1.10 and Appendix 5.1.11.

Table 5.13

Means and Standard Deviations of scores obtained by children aged between eight and eleven years experiencing intermittent, permanent or no father absence on the five verbal sub-tests of the WISC

Verbal Sub-Tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	5	5	3	5	5	3	5	54
General Information	Mean	11.00	7.33	9.80	8.60	11.00	10.60	9.20	9.67	11.20	11.00	8.33	9.60	9.93
	S.D.	3.54	4.16	2.39	2.70	2.55	2.88	2.17	0.58	1.79	2.24	3.51	1.34	2.56
Comprehension	Mean	12.00	13.33	11.40	7.80	13.00	13.20	13.80	13.00	13.60	12.40	9.33	8.80	11.80
	S.D.	3.08	3.06	1.52	3.83	2.12	1.30	2.68	1.00	0.89	1.67	4.04	1.79	2.92
Arithmetic	Mean	13.60	11.00	10.00	10.60	12.60	10.20	12.20	10.00	12.20	11.00	7.67	9.20	11.00
	S.D.	2.30	2.65	1.87	2.07	1.67	2.68	1.30	1.73	4.87	3.54	2.08	1.64	2.77
Similarities	Mean	13.60	11.00	12.60	9.40	10.40	12.60	12.60	13.33	13.00	11.40	10.00	11.60	11.83
	S.D.	2.70	1.73	1.14	3.36	2.97	3.05	2.79	2.52	3.08	2.61	4.36	1.14	2.75
Vocabulary	Mean	13.40	13.00	12.60	13.40	13.20	13.40	13.00	13.00	14.20	12.20	12.00	10.20	12.81
	S.D.	2.07	1.73	1.82	3.51	2.95	2.07	1.87	1.00	2.59	1.30	2.00	1.64	2.22

S.D. = Standard Deviation

Table 5.14

A summary of the analysis of variance of scores obtained by children aged between eight and eleven years on the verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	3.43	1	3.43	< 1	n.s.
Social Class (B)	87.16	1	87.16	5.03	.05
Type of Father Absence (C)	11.86	2	5.93	< 1	n.s.
A x B x C	114.77	2	57.48	3.31	.05
Subjects within groups	728.43	42	17.34		
Verbal Sub-tests (D)	267.85	4	66.96	18.04	.01
B x D	40.55	4	10.14	2.88	.05
A x C x D	74.94	8	9.37	2.52	.025
Subjects within groups x D	623.44	168	3.71		

Table 5.15

The results of the analysis of simple main effects of type of father absence on scores obtained by children aged between eight and eleven years over all the verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, Middle Class Males	32.98	2	16.49	< 1	n.s.
Type of Absence, Working Class Males	60.64	2	30.32	1.75	n.s.
Type of Absence, Middle Class Females	11.96	2	5.98	< 1	n.s.
Type of Absence, Working Class Females	54.89	2	27.44	1.58	n.s.
Subjects within groups	728.43	42	17.34		

A significant simple main effect of social class was obtained for males experiencing intermittent absence (F = 4.71, d.f. = 1,42, p < .05) and for females experiencing no father absence (F = 5.41, d.f. = 1,42, p < .05). In both cases middle class children obtained higher scores over all the verbal sub-tests of the WISC than did working class children. A significant simple main effect of sex of

child was obtained for working class children experiencing no father absence (F = 4.09, d.f. = 1,42, p < .05). Working class boys obtained higher scores than did working class girls over all verbal sub-tests of the WISC.

Interaction between social class and sub-test score: A significant two-way interaction was obtained between social class and sub-test score (F = 2.88, d.f. = 4,168, p < .05). An analysis of simple main effects of social class for each sub-test was carried out and the results of this analysis may be found in Appendix 5.1.12. Significant effects of social class were obtained for the Comprehension sub-test (F = 9.91, d.f. = 1,42, p < .01) and for the Similarities sub-test (F = 5.56, d.f. = 1,42, p < .025). In both cases middle class children obtained higher scores than did working class children.

Interaction between sex of child, type of father absence and verbal sub-test score: A further significant three-way interaction was found for sex of child, type of father absence and verbal sub-test (F = 2.52, d.f. = 8,168, p < .025). An analysis of simple main effects of type of father absence was carried out and the results of the analysis may be found in Table 5.16. A significant simple main effect of father absence was found for males on the Comprehension sub-test (F = 4.29, d.f. = 2,42, p < .025). Paired comparisons of means were made between the permanent absence group and the no absence group together and the intermittent absence group, and between the permanent absence group and the no absence group. The significant level was set at .025. The difference between the permanent and no absence groups and the intermittent absence group was

Table 5.16

The results of the analysis of simple main effects of father absence on scores obtained by children aged between eight and eleven years on the verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, Male, General Information	4.67	2	2.34	< 1	n.s.
Type of Absence, Female, General Information	9.31	2	4.66	< 1	n.s.
Subjects within groups x General Information	280.00	42	6.67		
Type of Absence, Male, Comprehension	49.06	2	24.53	4.29	.025
Type of Absence, Female, Comprehension	21.02	2	10.51	1.84	n.s.
Subjects within groups x Comprehension	240.13	42	5.72		
Type of Absence, Male, Arithmetic	19.94	2	9.97	1.48	n.s.
Type of Absence, Female, Arithmetic	34.10	2	17.05	2.53	n.s.
Subjects within groups x Arithmetic	283.47	42	6.75		
Type of Absence, Male, Similarities	15.60	2	7.80	1.06	n.s.
Type of Absence, Female, Similarities	1.73	2	0.87	< 1	n.s.
Subjects within groups x Similarities	310.27	42	7.39		
Type of Absence, Male, Vocabulary	0.74	2	0.37	< 1	n.s.
Type of Absence, Female, Vocabulary	0.74	2	0.37	< 1	n.s.
Subjects within groups x Vocabulary	206.00	42	4.90		

significant (F = 8.02, d.f. = 1,42; p < .01). There was no significant difference between the permanent absence group and the no absence group (F = <1, d.f. = 1,42, p < .025). The result indicated that boys experiencing intermittent father absence obtained lower scores on the Comprehension sub-test than did boys experiencing permanent or no father absence.

An analysis of simple main effects of sex of child was carried out for each combination of type of father absence and verbal sub-test. The results of this analysis may be found in Appendix 5.1.13. Significant simple main effects of sex of child were obtained for scores obtained by children experiencing intermittent absence on the Comprehension sub-test (F = 7.67, d.f. = 1,42, p < .025) and for scores obtained by children experiencing permanent absence on the Arithmetic sub-test (F = 5.58, d.f. = 1,42, p < .025). Males experiencing intermittent absence obtained lower scores than did females on the Comprehension sub-test and males experiencing permanent father absence obtained higher scores than did females on the Arithmetic sub-test.

(c) Examination of Performance Sub-Tests Scores

Scores obtained by children on the Performance sub-tests of the WISC may be found in Appendix 3.3.3. A summary of these scores which presents the means and standard deviations of each sub-group and the means and standard deviations of each sub-test may be found in Table 5.17. A four-way analysis of variance was carried out on these scores. The four factors were type of father absence, intermittent,

Table 5.17

Means and Standard Deviations of scores obtained by children aged between eight and eleven years experiencing intermittent, permanent or no father absence on the five performance sub-tests of the WISC

Performance Sub-tests Scores		MALES						FEMALES						All Subjects
		MIDDLE CLASS			WORKING CLASS			MIDDLE CLASS			WORKING CLASS			
		Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	Intermittent Absence	Permanent Absence	No Absence	
	Number of Subjects	5	3	5	5	5	5	5	3	5	5	3	5	54
Picture Completion	Mean	10.60	10.67	11.40	11.00	13.80	13.00	10.80	10.00	13.00	12.40	9.33	10.00	11.48
	S.D.	1.52	2.08	2.07	3.67	3.03	2.83	2.39	1.00	2.92	2.30	2.31	1.73	2.59
Picture Arrangement	Mean	12.60	11.33	11.40	12.00	14.40	11.80	10.00	10.33	11.20	13.00	9.67	11.60	11.56
	S.D.	1.95	2.52	2.07	3.00	3.05	1.79	3.08	0.58	2.28	2.65	4.16	3.36	2.77
Block Design	Mean	11.20	10.33	13.20	13.00	15.60	11.40	10.40	13.67	11.00	13.80	11.00	10.60	12.15
	S.D.	2.39	4.04	4.44	3.54	2.79	2.07	1.34	1.53	3.54	3.77	2.00	3.05	3.19
Picture Assembly	Mean	10.80	11.33	10.80	12.00	14.60	11.00	8.40	13.67	11.60	12.20	11.00	9.20	11.31
	S.D.	2.17	2.08	3.11	3.08	2.07	3.00	1.52	1.53	2.19	1.30	1.73	1.48	2.60
Coding	Mean	9.80	12.33	8.20	9.60	14.20	12.00	11.60	15.33	12.20	13.20	9.67	12.20	11.61
	S.D.	1.92	2.08	3.55	3.58	4.76	4.90	1.95	4.16	4.32	1.64	2.08	4.32	3.70

S.D. = Standard Deviation

permanent and no absence; sex of child; social class, middle class and working class and sub-test, with one level for each of the five sub-tests. The last factor was a repeated measures factor. Since the cell frequencies for the type of father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in the cell frequencies is unrelated to experimental treatments. A summary of the results of this analysis showing main effects and significant interactions may be found in Table 5.18. A complete table of the results of the analysis may be found in Appendix 4.3.3.

Table 5.18

A summary of the analysis of variance on scores obtained by children aged between eight and eleven years on the performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	12.67	1	12.67	< 1	n.s.
Social Class (B)	26.00	1	26.00	1.34	n.s.
Type of Father Absence (C)	30.98	2	15.49	< 1	n.s.
A x B x C	169.26	2	84.63	4.36	.025
Subjects within groups	815.81	42	19.42		
Performance sub-tests (D)	19.24	4	4.81	< 1	n.s.
A x D	54.24	4	13.56	2.56	.05
Subjects within groups x D	888.99	168	5.29		

Main Effects: Overall there was no effect of father absence (F = <1, d.f. = 2,42, p > .05). No significant main effects of sex of child, social class or sub-tests were obtained.

Interaction between sex of child, social class and type of father absence: A significant three-way interaction between sex, social class and type of absence was found (F = 4.36, d.f. = 2,42, p < .025). An analysis of simple main effects of type of absence, the results of which may be found in Table 5.19 revealed no significant effects. Further analyses of simple main effects of sex of child and social class were carried out and the results of these may be found in Appendix 5.1.14 and Appendix 5.1.15. A significant simple main effect of sex of child was obtained for working class children experiencing permanent father absence (F = 10.61, d.f. = 1,42, p < .01). Males experiencing permanent father absence obtained higher scores over all the performance sub-tests of the WISC than did females experiencing permanent absence. A significant simple main effect of social class was obtained for males experiencing permanent father absence (F = 6.09, d.f. = 1,42, p < .025). Working class males experiencing permanent father absence obtained higher scores over all the performance sub-tests of the WISC than did middle class males experiencing permanent father absence.

Interaction between sex of child and performance sub-test score: One significant two-way interaction between sex of child and sub-test score was found (F = 2.56, d.f. = 4,168, p < .05). An analysis of simple main effects of sex of child was carried out and the results of this analysis may be found in Appendix 5.1.16. No significant

Table 5.19

The results of the analysis of simple main effects of type of father absence on scores obtained by children aged between eight and eleven years over all performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, Middle Class Boys	0.56	2	0.28	< 1	n.s.
Type of Absence, Working Class Boys	116.33	2	58.17	3.00	n.s.
Type of Absence, Middle Class Girls	61.74	2	30.87	1.59	n.s.
Type of Absence, Working Class Girls	92.47	2	46.24	2.38	n.s.
Subjects within groups	815.81	42	19.42		

effects were obtained. That is there was no difference between the scores obtained by males and females on individual performance sub-tests of the WISC. However, the pattern of sub-test scores differed. Males obtained higher scores than did females on Picture Completion, Picture Arrangement, Block Design and Object Assembly. Females obtained higher scores on Coding.

A summary of the results of the investigation of cognitive development obtained from children aged between eight and eleven years

A. Differences between the intermittent, permanent and no father absence groups:

1. There was no difference found in IQ scores or performance sub-tests scores between children experiencing intermittent, permanent or no father absence.

2. Boys experiencing intermittent father absence obtained lower scores on the Comprehension sub-test than did boys experiencing permanent or no father absence.

3. There was no difference found in verbal sub-tests scores between girls experiencing intermittent, permanent or no father absence.

B. Differences within the intermittent, permanent and no father absence groups:

1. In the permanent father absence group working class males obtained higher scores over all three IQ scales than did working class females and middle class females obtained higher scores over all three IQ scales than did working class females.

2. Middle class children experiencing intermittent father absence obtained Verbal IQ scores significantly higher than Performance IQ scores.

3. Working class children experiencing intermittent and permanent father absence obtained Performance IQ scores significantly higher than Verbal IQ scores.

4. The Verbal IQ scores of middle class children experiencing intermittent father absence were higher than those obtained by working class children experiencing intermittent father absence.

5. Amongst males experiencing intermittent absence of the father and females whose fathers were not absent middle class children obtained higher scores over all verbal sub-tests than did working class children.

6. Working class boys experiencing no father absence obtained higher scores over all verbal sub-tests than did working class girls experiencing no absence.

7. Boys experiencing intermittent father absence obtained lower scores on the Comprehension sub-test than did girls experiencing intermittent father absence.

8. Within the permanent father absence group males obtained higher scores on Arithmetic sub-test than did girls.

9. Within the group of working class children experiencing permanent absence of the father males obtained higher scores over all the performance sub-tests than did females.

10. Amongst males experiencing permanent father absence those in the working class obtained higher scores over all performance sub-tests than did those in the middle class.

C. Other results:

1. Middle class children obtained higher Verbal IQ scores than did working class children.

2. Middle class children obtained significantly higher scores on the Comprehension and Similarities sub-tests than did working class children.

3. The pattern of performance sub-tests differed for males and females. Males obtained higher scores than females on Picture Completion, Picture Arrangement, Block Design and Object Assembly, whilst females obtained higher scores on Coding. However, none of the differences between the males and females scores was significant.

A Discussion of the Results of the Investigation of Cognitive Development

In Chapter One a review of the literature examining the relationship between father absence and cognitive development revealed that findings were contradictory. Some studies reported an association between father absence and cognitive deficits, both when the absence was permanent (Blanchard & Biller, 1971; Douglas et al, 1968; Lessing et al, 1970; Maxwell, 1961; Santrock, 1972) or intermittent (Lee, 1974). Other studies reported that no such association could be established (Newstat, 1973; Risen, 1939; Rutter, Tizard & Whitmore, 1970; Solomon et al, 1972; Wasserman, 1972).

The findings of Lessing et al (1970) indicated that the effect of father absence was greatest on working class children and in their study middle class children experiencing father absence obtained higher scores on some measures than did middle class children whose fathers were not absent. However, other studies which have examined children of low socioeconomic status have found that father absence has no effect on cognitive ability (Newstat, 1973; Solomon et al, 1972; Wasserman, 1972).

One area in which there is no dispute is that of sex differences. In those studies examining both boys and girls that have found absence of the father to have an effect, that effect is reported to be greater for boys than for girls (Douglas et al, 1968; Lessing et al, 1970; Santrock, 1972).

In the present investigation the measure used to study cognitive development was the WISC. The effects of father absence, permanent

resulting from parental divorce or intermittent resulting from the fathers' occupation, on children at two different age levels were examined. The younger group of children were aged between 5 and 7 years and the older group between 8 and 11 years.

In an earlier investigation of children aged between 5 and 7 years, reported in Chapters Two and Three, father absence was found to have no effect on WISC scores. No evidence was obtained to indicate that father absence, permanent or intermittent, affected middle class or working class male or female children. When the results of the present investigation of this age level were examined again no difference was found between children whose fathers were away intermittently because of their occupation, away permanently because of parental divorce, or not away at all, in the scores they obtained on the Full Scale, Verbal Scale or Performance Scale of the WISC, nor in their scores on individual sub-tests.

Two other investigations concerned with absence of the father employed the WISC as a measure of cognitive development. They were those of Maxwell (1961) and Lessing et al (1970). Maxwell, who did not examine the effects of sex of child and social class, reported that children who had experienced absence of the father due to death or divorce, obtained lower scores on Comprehension, Vocabulary, Picture Completion, Picture Arrangement and Coding sub-tests. Lessing et al, found that children experiencing father absence obtained lower scores on the Block Design and Object Assembly sub-tests and on Performance Scale IQ. They also found that some results varied with the social class and sex of the children. Amongst boys those whose

fathers were absent obtained lower scores on the Arithmetic and Coding sub-tests, whilst amongst girls there were no differences on any measures due to father absence. Working class children whose fathers were absent obtained lower scores on Information and Similarities sub-tests and on Verbal and Full Scale IQ. In middle class children the direction of the effect of absence was reversed, in that middle class children whose fathers were absent obtained higher scores on the Comprehension and Vocabulary sub-tests and on Verbal Scale IQ.

The results of Maxwell and Lessing et al, have not been repeated in either of the two investigations of children aged between 5 and 7 years reported here. No evidence has been obtained to indicate that father absence itself has any effect on the cognitive development of children aged between 5 and 7 years. However the children in Maxwell's (1961) study were aged 8 years and over, whilst the children in the study of Lessing et al (1970) were aged 9 years and over. All the other studies that have reported that father absence affects cognitive development have been of children older than 7 years.

It was to test the possibility that absence of the father did affect cognitive development, but that this effect did not appear until after the children had past the age of 7 years that an additional investigation of children aged between 8 and 11 years was carried out. An examination of the results of this study revealed no differences between children experiencing permanent absence of the father as a result of parental divorce, intermittent absence because of his occupation or no absence at all in the scores obtained on the Full Scale Verbal Scale or Performance Scale nor in scores obtained on any

of the Performance sub-tests. Also in only one of the five verbal sub-tests was any difference found. When the scores of the Comprehension sub-test were examined it was found that boys whose fathers were away intermittently as a result of their occupation obtained lower scores on this sub-test than did boys whose fathers were permanently absent or not away at all.

The results of the study of children aged between 8 and 11 years again provide no support for the findings of Lessing et al (1970) or of Maxwell (1961). In both of these studies absence of the father resulting from his death or parental divorce was associated with differences in WISC scores, whilst in the present investigation permanent absence of the father resulting from parental divorce was not associated with any different scores. When the findings of Lessing et al were examined in Chapter One it was stated that, given the multiple analyses they used their criterion for statistical significance should have been a probability of .01 or less and not .05 which was the one chosen by them. If this more strict criterion was employed the only results that remained significant were those applying to working class boys. Working class boys experiencing father absence obtained lower scores than working class boys who had not experienced such absence on the Similarities and Vocabulary sub-tests and on Verbal IQ. It may be that even this criterion for significance was not sufficiently strict and in the study by Lessing et al, all their results were due to chance factors.

A more convincing explanation and one that also applies to the Maxwell (1961) study involves the fact that in both of them the

samples of children to be investigated were drawn from the population of children referred to child guidance clinics. It may be that father absence is an important variable in cognitive development in children who are diagnosed as having emotional and behavioural problems in that it may increase the stress experienced by them, but not in the cognitive development of children such as those investigated in the present study who came from a more general population.

The results obtained from the present study of children whose fathers were in the Royal Navy and therefore intermittently absent, failed to replicate those of Lee (1974) who also studied boys from military families. Lee reported that, compared to boys from civilian families, those from military families who experienced intermittent absence of the father obtained poorer scores on measures of numerical ability. The WISC has a measure of numerical ability in the Arithmetic sub-test. No difference was found between boys whose fathers were members of the Royal Navy and boys who were from civilian families in their scores on the Arithmetic sub-test. Lee did state that the effect of father absence was not very marked, but that the earlier the absence of the father first occurred the greater the effect on numerical ability. It may be that in the present study, whilst absence of the father did occur before the age of 5 in all children, it did not occur as early as in Lee's sample. It is also possible that the results reflected differences in the measures used. However, no information was available about the tests of numerical ability employed by Lee (1974).

The only result indicating that absence of the father was related in any way to scores on the Arithmetic sub-test was that which

demonstrated that amongst children whose fathers were permanently absent, boys obtained higher scores than girls. This result was unexpected insofar as the WISC was standardised in such a way as to remove sex differences as far as possible (Seashore et al, 1950). However, a comparison of boys and girls experiencing intermittent, permanent or no father absence revealed no differences between the absence groups in the scores they obtained on the Arithmetic sub-test. Therefore it was not possible to determine whether the results indicated that permanent absence of the father was associated with a higher score than would be expected in boys or a lower score than would be expected in girls.

A result that demonstrated that intermittent absence of the father was associated with differences in WISC scores was the finding that, on the Comprehension sub-test, boys aged between 8 and 11 years whose fathers were intermittently away, obtained lower scores than did boys of this age who were not away at all. This result was not obtained when the scores of girls were examined. That the Comprehension scores of boys experiencing intermittent absence of the father were low was reaffirmed by the finding that in this absence group boys obtained lower scores on this sub-test than did girls. This sex difference was not found amongst children experiencing permanent or no absence of the father.

Before considering the implications of this result it is first necessary to establish what the Comprehension sub-test measures. Glasser and Zimmerman (1967) state that the sub-test measures the child's ability to utilise practical information in a socially

acceptable way. Cohen (1959) in his analysis of the factorial structure of the WISC reports that, in common with all other sub-tests Comprehension measures general intelligence. It also measures verbal judgment and verbally retained knowledge. The weighting of the last two differs at different ages. At age 7½ years the weighting on verbal judgment is high and that on verbally retained knowledge low. At age 13 the position has been reversed. At the age of the present sample there would be some loading on both verbal judgment and verbally retained knowledge. It may be, therefore, that in boys intermittent absence of the father is associated with lower levels of these two aspects of verbal ability. However Cohen (1959) makes the further point that the Comprehension sub-test has a high error variance and this sub-test alone should not be used as a reliable measure of verbal judgment or verbally retained knowledge. When the results of the other verbal sub-tests were examined no evidence was found to indicate that boys aged between 8 and 11 years whose fathers were away intermittently obtained lower scores than did boys whose fathers were away permanently or not away at all. In addition no evidence was obtained from either of the studies of children aged between 5 and 7 years that intermittent absence of the father had any effect on the verbal ability of boys. Therefore it is not possible to conclude from this result alone that intermittent absence of the father is associated with lower levels of verbal ability in boys.

It has been suggested that low scores on the Comprehension sub-test may provide an indication of the presence of emotional disturbance. Glasser and Zimmerman (1967) state that the Comprehension sub-test is

particularly vulnerable to maladjustment '.... since transient emotional reactions become the governing factor rather than cognitive functioning.' However, in the next chapter it will be shown that there is no association between intermittent absence of the father and a higher incidence of emotional and behavioural problems in children. Rather, it is permanent absence that is associated with a higher incidence of problems. No evidence was produced in this study to indicate that the Comprehension sub-test scores of children whose fathers were permanently away were low. Therefore without any substantiating evidence it is not possible to conclude that intermittent absence of the father is associated with lower levels of verbal ability in boys. Nor is it possible to conclude that the result indicates a higher level of emotional disturbance.

The investigation of the effects of father absence on cognitive development did produce results that indicated that absence of the father both permanent and intermittent was associated with different patterns of WISC scores. However the results differed according to the age level studied. Amongst children aged between 5 and 7 years boys experiencing intermittent absence of the father obtained Performance IQ scores higher than Verbal, whilst among children aged between 8 and 11 years this pattern of scores was found in working class children experiencing both intermittent and permanent absence.

It has been reported that where verbal ability is lower than non-verbal ability this indicates that a child is not achieving his or her potential (Bernstein, 1961). It has also been reported that verbal ability is more affected by environmental factors than is non-verbal

ability (Bernstein, 1961; Fraser, 1958; Vernon, 1969; Walberg & Marjoribanks, 1973). It might be that absence of the father is an important environmental variable negatively affecting verbal ability. Evidence from other research does not support this conclusion.

Studies exist that have compared the verbal and quantitative abilities of adults and children who have experienced absence of the father. They report that such absence is associated with a decrease in quantitative ability relative to verbal ability (Altus, 1958; Carlsmith, 1964; Landy, Rosenberg & Sutton Smith, 1969; Nelson & Maccoby, 1966). No studies have been uncovered that have compared verbal and non-verbal IQ scores of individual children in order to examine whether the pattern of these scores is affected by father absence. However, inspection of mean scores provided by Lessing et al (1970) revealed that in their sample no children experiencing absence of the father obtained Performance IQ scores much greater than Verbal IQ scores. The biggest discrepancy between scores in that direction was found for working class children whose fathers were not absent and there the difference was only two IQ points.

Findings concerning visual spatial ability indicate that where absence of the father has an effect on scores the scores are lower in children experiencing such absence (Barclay & Cusumano, 1967).

In spite of the finding that amongst children aged between 5 and 7 years, boys whose fathers were intermittently away obtained Verbal IQ scores lower than Performance IQ scores it is not possible to conclude that absence of the father is the most important determining factor. If this were so it would be expected that boys whose fathers were away

permanently would also exhibit such a pattern of scores. In fact the only other children in this age level to do so were girls whose fathers had never been away from home. However, the findings from the study of children aged between 8 and 11 years provide stronger support for the influence of absence of the father. Here working class children whose fathers were away both permanently and intermittently obtained Verbal IQ scores lower than Performance IQ scores. Therefore, in the older children from working class families it was possible that it was deprivation of something normally provided by the father that was exerting a negative influence on verbal ability.

Attributes of the father who is continually present have been shown to be positively related to the cognitive ability of children. For example Marjoribanks (1972) found that father dominance was significantly correlated with boys' verbal ability. Radin (1972, 1973) found a positive relationship between paternal nurturance and IQ in boys. Honzik (1967) found that friendliness of the father towards his daughter was positively related to IQ of girls. However there is some research suggesting that extensive participation in the child's intellectual efforts by the father does not have a positive effect on the child's cognitive development (Radin, 1976). Research investigating fathers and daughters has indicated that some distance and autonomy from the father is associated with higher levels of cognitive competence in girls (Jordan, Radin & Epstein, 1975). Studies that have reported a positive association between paternal nurturance and IQ in children found that this association was most marked in middle class boys (Jordan, Radin & Epstein, 1975; Radin, 1973). Also investigations of

child-rearing have reported that paternal involvement with children is greatest in middle class homes (Benson, 1968; Kohn & Carroll, 1960; Lynn, 1974; Newson & Newson, 1968) particularly paternal involvement with boys (Newson & Newson, 1976). Therefore if it was deprivation of something usually provided by the father that produced the negative effect on the verbal ability of the children it would be expected that the verbal ability of middle class children experiencing permanent or intermittent absence of the father would also be affected.

Examination of the WISC scores of middle class children aged between 8 and 11 years revealed that there was no difference between Verbal and Performance IQ in children experiencing permanent absence of the father. Amongst children whose fathers were intermittently away Verbal IQ scores were higher than Performance IQ scores. In addition no evidence exists that absence of the father is associated with verbal ability lower than non-verbal. Research indicates the reverse to be the case (Altus, 1958; Carlsmith, 1964; Landy, Rosenberg & Sutton Smith, 1969; Nelson & Maccoby, 1966).

Verbal ability lower than non-verbal ability is a pattern reported to be particularly associated with working class children and within the working class with children of the lowest socioeconomic status (Bernstein, 1961). One explanation of this that has been put forward relates low verbal ability in working class children to differences in verbal interaction found amongst mothers and children in this social class compared to mothers and children in the middle class (Bernstein, 1961; Robinson, 1972). Working class mothers have been reported as talking to their children less than do middle class mothers (Bernstein

& Brandis, 1970; Hess & Shipman, 1965), to use less abstraction when talking with their children (Hess & Shipman, 1965) and to use imperatives rather than explanations (Cook, 1973; Henderson, 1970; Hess & Shipman, 1965). One study provides evidence that within the working class, father absence exacerbates these differences. Hess and Shipman (1965) found that mothers of lower socioeconomic status whose husbands were absent were more likely than other mothers of the same status to use imperatives rather than explanations with their children and they also had the lowest rate of verbal interaction.

If verbal interaction between mothers and children is an important environmental variable in determining the verbal ability of children than it would be expected that mothers of children with low verbal ability relative to non-verbal ability would interact differently with their children from mothers whose children did not exhibit such a pattern of scores. The interaction between mothers and children together with other environmental variables will be examined in Chapter Seven and the attempt will be made there to relate differences in the cognitive ability of the children to environmental factors other than the absence of the father per se.

Within the group of working class children whose fathers were permanently away, both males and females obtained Verbal IQ scores lower than Performance IQ scores. However, there was evidence from other results that the Performance IQ of the boys was higher than expected whilst the girls obtained low scores on all IQ measures. When the scores of all five Performance sub-tests from which the Performance IQ was derived, were examined it was found that working

class boys experiencing permanent father absence obtained higher scores than did middle class boys experiencing permanent absence. No results were obtained to indicate that these middle class boys obtained performance sub-tests scores lower than other middle class boys. In the studies of younger children reported earlier it has been found that middle class children obtained performance sub-tests scores higher than those obtained by working class children. This finding of a class difference in the opposite direction amongst boys whose fathers were permanently away suggests that in the study of children aged between 8 and 11 years the working class boys experiencing permanent absence obtained performance scores higher than expected.

That working class girls obtained low scores on all measures was indicated by two results. The first was that amongst working class children whose fathers were away permanently boys obtained higher scores over all three IQ measures than did girls. Also, it was only amongst girls whose fathers were permanently away that the expected class difference was observed. Middle class girls obtained higher scores over all three IQ measures than did working class girls. There was no evidence that middle class girls whose fathers were permanently away obtained higher IQ scores than did other middle class girls. Therefore this suggests that the overall ability of working class girls in this absence group was low. Environmental factors will be examined in Chapter Seven in an attempt to account for this sex difference.

One finding relating to middle class children experiencing intermittent absence of the father has already been mentioned. That is

that amongst these children Verbal IQ scores were higher than Performance IQ scores. This pattern of scores is common amongst children of high IQ, but there was no evidence that the IQ of these children was any higher than that of middle class children whose fathers were away permanently or not away at all. That in the group of children experiencing intermittent absence of the father, working class children obtained low verbal scores whilst middle class children obtained high verbal scores was further demonstrated by one result. Only in this absence group was a significant social class difference in Verbal IQ obtained. A further finding indicated that the social class effect was most apparent in males. When the scores over all five verbal sub-tests from which the Verbal IQ was derived were examined, only amongst males experiencing intermittent absence were middle class scores higher than working class scores.

Research has been reported that has found an association between absence of the father and an increased level of verbal ability (Altus, 1958; Carlsmith, 1964; Landy, Rosenberg & Sutton Smith, 1969; Nelson & Maccoby, 1966). However, that higher level of verbal ability relative to non-verbal was not found in children whose fathers were away permanently indicated that it was not simply absence of the father that produced this pattern of scores. Therefore it is necessary to consider what aspects of the environment of the middle class children whose fathers are intermittently absent have a positive influence on verbal ability. It may be that when the father is home he has a particularly close relationship with his children. Jordan, Radin and Epstein (1975) found that there was a positive relationship between

paternal nurturance and IQ scores in middle class boys. However they found that independence of the daughters from the fathers was positively associated with the IQ scores of girls. Another positive influence might be that the verbal interaction between mothers and middle class children is increased when the father is intermittently away. It must be noted that whatever factors were operating in middle class children aged between 8 and 11 they either have no effect until this age or else they are not present in all middle class homes from which the father is intermittently absent. In the sample of children aged between 5 and 7 years boys in the intermittent absence group obtained Performance IQ scores higher than Verbal IQ whatever their social class. Further examination of environmental factors other than absence of the father is necessary if these findings are to be explained and this will be done in Chapter Seven.

Social class differences between the children aged between 5 and 7 years in the second study were similar to those obtained in the first. They were also in accordance with previous research (e.g. Davie et al, 1972; Douglas et al, 1968). Middle class children obtained significantly higher scores than did working class children on Full Scale, Verbal Scale and Performance Scale IQ and also on the five verbal sub-tests. However the influence of father absence was more apparent in the children aged between 8 and 11 years and this confounded the effect of social class. Social class differences were present and were in the expected direction but were not as marked as in the younger groups. Middle class children obtained higher scores than working class children on Verbal Scale IQ and also on the Comprehension and Similarities

sub-tests. Middle class children also obtained higher scores on the Full Scale IQ and on the General Information, Arithmetic and Vocabulary sub-tests, but the differences between their scores and those obtained by working class children were not large enough to be significant.

CHAPTER SIX

EMOTIONAL AND BEHAVIOURAL PROBLEMS

The incidence of emotional and behavioural problems exhibited by the children was assessed using two measures. The first was the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2). The second was the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2). Copies of the scales may be found in Appendix 2. From both of these scales it was possible to obtain three scores, a total score, a neuroticism sub-scale score and an anti-social behaviour sub-scale score. The higher the score the larger was the number of problems reported. A score of 13 or more on Scale A(2) and a score of 9 or more on Scale B(2) indicated the likely presence of some psychiatric disorder (Rutter, 1967; Rutter, Tizard & Whitmore, 1970). Children obtaining such a score were classified as exhibiting anti-social or neurotic disorder according to which of their sub-scale scores, neurotic or anti-social behaviour, was the higher.

In this, the second investigation, 52 children aged between 5 and 7 years and 54 children aged between 8 and 11 years were studied.

1. The Results of the Investigation of Children aged Between Five and Seven Years

(a) Examination of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

(i) Total Scores: Total scores obtained by the children may be found in Appendix 3.2.4. A summary of these scores showing the means and standard deviations obtained by each type of father absence - social class - sex of child sub-group may be found in Table 6.1. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of the analysis showing main effects and significant interactions may be found in Table 6.2. A complete table of the results of the analysis may be found in Appendix 4.2.4.

Overall, there was no effect due to type of father absence ($F = <1$, d.f. = 2,40, $p > .05$) and this factor did not interact with any of the other factors.

Table 6.1

Means and standard deviations of total scores obtained by children aged between five and seven years experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	10.80	9.67	11.40
		Standard Deviation	6.14	5.77	6.31
		Number of Subjects	5	3	5
	Working Class	Mean	6.80	10.40	7.25
		Standard Deviation	3.96	7.30	1.50
		Number of Subjects	5	5	4
FEMALES	Middle Class	Mean	6.80	7.67	8.00
		Standard Deviation	5.45	0.58	3.74
		Number of Subjects	5	3	4
	Working Class	Mean	11.40	12.00	7.50
		Standard Deviation	5.59	9.13	1.29
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	8.95	10.13	8.71
		Standard Deviation	5.38	6.35	4.07
		Number of Subjects	20	15	17

Table 6.2

A summary of the results of the analysis of variance of the total scores obtained by children aged between five and seven years on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2), showing main effects and significant interactions

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	0.70	1	0.70	< 1	n.s.
Social Class (B)	4.31	1	4.31	< 1	n.s.
Type of Father Absence (C)	38.19	2	19.09	< 1	n.s.
A x B	117.46	1	117.46	4.21	.025
Subjects within groups	1116.08	40	27.90		

One significant two-way interaction between sex of child and social class was obtained ($F = 4.21$, d.f. = 1,40, $p < .025$). An examination of means shown in Table 6.1 revealed that amongst middle class children males obtained higher total scores than females, whilst amongst working class children females obtained higher total scores than males. Analyses of simple main effects of sex and social class produced no significant effects. The results of these analyses are shown in Appendix 5.2.1 and 5.2.2.

Using the table of total scores found in Appendix 3.2.4, the number of children who obtained total scores of 13 or more, the score considered to indicate the presence of psychiatric disorder (Rutter, Tizard & Whitmore, 1970), was calculated for each of the three absence groups, intermittent, permanent and no absence. The number of children in each absence group obtaining such a score may be found in Table 6.3. Examination of scores indicated that the incidence of disorder was highest in the permanent absence group and lowest in the no absence group.

Table 6.3

The number of children aged between five and seven years in each of the father absence groups obtaining a score of thirteen or more on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
13 or more	25	5	40	6	5.89	1
Less than 13	75	15	60	9	94.11	16
TOTAL	100	20	100	15	100	17

The expected frequencies in the cells were too small to enable a chi-squared test to be carried out. Two Fisher Exact Probability Tests were carried out, one comparing the intermittent absence and the no absence groups and the other comparing the permanent and no absence groups. A significant result was obtained for the second

comparison ($p < .025$). Therefore the incidence of psychiatric disorder exhibited by the children in the permanent absence group was significantly higher than that exhibited by children in the no absence group. There was no difference between the intermittent and no absence groups ($p > .025$).

(ii) Neuroticism and Anti-social Behaviour Sub-Scales: A neuroticism sub-scale score was obtained for each child by summing scores obtained on items C, G, V, 6 and 15 ('suffers from asthma', 'had tears on arrival at school or refused to go into the building', 'does he/she have any sleeping difficulties?', 'often worried, worries about many things', 'tends to be fearful or afraid of new things or new situations'). Scores obtained by children on this sub-scale may be found in Appendix 3.2.5.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items III, 3, 13, 17 and 18 ('does he/she ever steal things?', 'often destroys own or others' property', 'is often disobedient', 'often tells lies', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.2.6.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores of 13 or more. Rutter, Tizard and Whitmore (1970) used the neurotic and anti-social behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was

carried out on those children obtaining total scores of 13 or more in the present study. Twelve children obtained such a score. One child in the intermittent absence group and one child in the permanent absence group obtained equal scores on the two sub-scales and so were not included. The distribution of the remaining 10 children into neurotic or anti-social classifications was calculated for each of the three father absence groups, permanent, intermittent or no absence and may be found in Table 6.4.

Table 6.4

The incidence of neurotic and anti-social disorder exhibited by children aged between five and seven years in each of the three father absence groups, as measured by the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	2	1	1
Anti-social	2	4	0

Total number of subjects = 10

Two Fisher Exact Probability Tests were carried out, one between the permanent father absence group and the no absence group and the other between the intermittent absence group and the no absence group. No significant results were obtained ($p > .025$). That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

(iii) Analysis of individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2):

Five items of Scale A(2) were examined separately. One item referred to bed-wetting, one to stealing and three to peer relationships, all of which have been reported to be affected by father absence (Douglas, 1970; Gibson, 1969; Matthews, 1969; Stolz, 1954; Tiller, 1958).

The five items were:

In the section on Health Problems

D. Does your child wet the bed?

In the section on Habits

III. Does your child ever steal things?

In the Behaviour section

4. Frequently fights, is extremely quarrelsome with other children

5. Not much liked by other children

18. Bullies other children

The method of analysis was the same as that used in the examination of individual items of Scale A(2) and B(2) in the first study. That is data was split into two groups working class and middle class and responses were analysed by means of the Fisher Exact Probability Test. Children in the permanently father absent group were compared with children in the no father absence group and children in the intermittently absent group were compared with children in the no father absence group. Two by two matrices were constructed using one of the two combinations of absence on one dimension and a response of yes or no on the other. Tables of the data may be found in

Appendices 3.2.7 and 3.2.8. No significant results were obtained ($p > .025$). That is father absence was not associated with different responses to any of the items of Scale A(2) examined separately.

A Summary of the Results Obtained from the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) for Children Aged Between Five and Seven Years

1. Father absence had no effect on the incidence of emotional and behavioural problems as measured by the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2).

2. Middle class boys exhibited a higher incidence of problems than did middle class girls. Working class girls exhibited a higher incidence of problems than did working class boys.

3. The number of children obtaining total scores indicative of the presence of psychiatric disorder was significantly higher in the permanent absence group than in the no absence group. There was no difference between the intermittent and no absence groups.

4. Father absence had no effect on the relative incidence of neurotic or anti-social disorder.

5. Father absence had no effect on the incidence of bed-wetting, poor peer relationships or stealing.

(b) Examination of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

(i) Total scores: Total scores obtained by the children may be found in Appendix 3.2.9. A summary of these scores showing the means

Table 6.5

Means and standard deviations of total scores obtained by children aged between five and seven years experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	4.20	2.67	6.40
		Standard Deviation	3.35	4.62	2.51
		Number of Subjects	5	3	5
	Working Class	Mean	3.80	10.20	5.50
		Standard Deviation	4.44	6.80	2.38
		Number of Subjects	5	5	4
FEMALES	Middle Class	Mean	3.40	2.00	1.50
		Standard Deviation	2.41	2.00	1.73
		Number of Subjects	5	3	4
	Working Class	Mean	4.60	5.00	1.50
		Standard Deviation	6.11	2.94	1.73
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	4.00	5.67	3.88
		Standard Deviation	3.97	5.56	3.04
		Number of Subjects	20	15	17

and standard deviations obtained by each sub-group may be found in Table 6.5. A three-way analysis of variance was carried out on the scores. The three factors were type of father absence, intermittent, permanent or no absence; sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of the analysis may be found in Table 6.6. A complete table of the results of the analysis may be found in Appendix 4.2.5.

Overall there was no effect due to type of father absence ($F = <1$, d.f. = 2,40; $p > .05$) and this factor did not interact with the other two factors.

A significant main effect due to sex of child was obtained ($F = 4.93$, d.f. = 1, 40; $p < .025$). Examination of scores indicated that the incidence of problems was highest amongst males.

Using the table of total scores found in Appendix 3.2.9, the number of children who obtained total scores of nine or more, the scores considered to indicate the presence of psychiatric disorder was calculated for each of the three absence groups, permanent, intermittent or no father absence. The number of children in each absence group who obtained such a score may be found in Table 6.7.

Table 6.6

A summary of the results of the analysis of variance of the total scores obtained by children aged between five and seven years on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2), showing main effects

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	76.07	1	76.07	4.93	.05
Social Class (B)	37.97	1	37.97	2.46	n.s.
Type of Father Absence (C)	14.25	2	7.12	< 1	n.s.
Subjects within Groups	617.66	40	15.44		

Table 6.7

The number of children aged between five and seven years in each of the three father absence groups obtaining a score of nine or more on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
9 or more	15	3	20	3	5.88	1
less than 9	85	17	80	12	94.12	16
TOTAL	100	20	100	15	100	17

Two Fisher Exact Probability Tests were carried out, one comparing the permanent absence group and the no absence group, the other comparing the intermittent absence group and the no absence group. No significant results were obtained ($p > .025$). That is father absence had no effect on the incidence of psychiatric disorder as measured by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2).

(ii) Neuroticism and Anti-social Behaviour Sub-scales: A neuroticism sub-scale score was obtained for each child by summing scores obtained on items 7, 10, 17 and 23 ('often worried, worries about many things', 'often appears miserable, unhappy, tearful or distressed', 'tends to be fearful or afraid of new things or new situations', 'has had tears on arrival at school or refuses to go into the building'). Scores obtained by children on this sub-scale may be found in Appendix 3.2.10.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items 4, 5, 15, 19, 20 and 26 ('often destroys or damages own or others' property', 'frequently fights or is extremely quarrelsome with other children', 'is often disobedient', 'often tells lies', 'has stolen things on one or more occasions in the past twelve months', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.2.11.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores of nine or more. Rutter (1967) used the neurotic and anti-social

behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was carried out on those children obtaining total scores of nine or more in the present study. Seven children obtained such a score. One child in the permanent absence group and one child in the no absence group obtained equal scores on the two sub-scales and were not included. The distribution of the remaining five children into neurotic or anti-social classifications was calculated for each of the three father absence groups, permanent, intermittent or no absence and may be found in Table 6.8.

Table 6.8

The incidence of neurotic and anti-social disorder exhibited by children aged between five and seven years in each of the three father absence groups, as measured by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	2	2	0
Anti-social	1	0	0

Total number of subjects = 5

Two Fisher Exact Probability Tests were carried out, one comparing the permanent absence group and the no absence group and the other comparing the intermittent absence group and the no absence group. No significant results were obtained ($p > .025$). That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

(iii) Analysis of individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Four items of Scale B(2) were examined separately. One item referred to stealing and three to peer relations, both of which have been reported to be affected by father absence (Douglas, 1970; Gibson, 1969; Stolz, 1954; Tiller, 1958).

Items examined separately were:

5. Frequently fights or is extremely quarrelsome with other children
6. Not much liked by other children
7. Has stolen things on one or more occasions in the past twelve months
8. Bullies other children.

The method of analysis used was the same as that employed in the individual item analysis of Scale A(2). That is data was split into two groups, working class and middle class and responses were analysed by means of Fisher Exact Probability Tests. Children in the permanently absent group were compared with children in the no father absence group and children in the intermittent absence group were compared to those in the no father absence group. Two by two matrices were constructed

using one of the two combinations on one dimension and a response of yes or no on the other. Tables of the data may be found in Appendices 3.2.12 and 3.2.13. No significant results were obtained ($p > .025$). That is father absence was not associated with different responses to any of the items of Scale B(2) examined separately.

A Summary of the Results of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2) for Children Aged Between Five and Seven Years

1. Father absence had no effect on the incidence of emotional and behavioural problems as measured by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2).
2. Males exhibited a higher incidence of problems than did females.
3. Father absence had no effect on the incidence of psychiatric disorder.
4. Father absence had no effect on the relative incidence of neurotic or anti-social disorder.
5. Father absence had no effect on the incidence of bed-wetting, poor peer relationships or stealing.

A Comparison Between the Results of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) and the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

A Pearson Product Moment Correlation was carried out on the scores obtained by children aged between 5 and 7 years on the two scales. A correlation coefficient between the two of 0.32 was obtained,

which was not significant ($p > .05$). Sixteen children were classified as exhibiting psychiatric disorder on the basis of their scores on either Scale A(2) or Scale B(2). Of these three were so classified on both scales.

2. The Results of the Investigation of Children Aged Between Eight and Eleven Years

(a) Examination of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

(i) Total scores: Total scores obtained by the children may be found in Appendix 3.3.4. A summary of these scores showing the means and standard deviations obtained by each type of father absence - social class - sex of child sub-group may be found in Table 6.9. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of the analysis showing main effects may be found in Table 6.10. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.3.4.

Table 6.9

Means and standard deviations of total scores obtained by children aged between eight and eleven years experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	8.80	15.67	8.40
		Standard Deviation	3.11	2.08	8.20
		Number of Subjects	5	3	5
	Working Class	Mean	7.40	12.20	7.60
		Standard Deviation	5.32	6.34	2.70
		Number of Subjects	5	5	5
FEMALES	Middle Class	Mean	7.00	10.67	6.60
		Standard Deviation	3.81	9.65	3.36
		Number of Subjects	5	3	5
	Working Class	Mean	8.40	9.33	9.60
		Standard Deviation	4.39	3.06	3.21
		Number of Subjects	5	3	5
Total for all subjects in each absence group		Mean	7.90	12.00	8.05
		Standard Deviation	3.96	6.13	4.64
		Number of Subjects	20	14	20

Table 6.10

A summary of the results of the analysis of variance of the total scores obtained by children aged between eight and eleven years on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2), showing main effects

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	25.60	1	25.60	< 1	n.s.
Social Class (B)	2.41	1	2.41	< 1	n.s.
Type of Father Absence (C)	182.32	2	91.15	3.50	.05
Subjects within groups	1092.80	42	26.02		

A significant main effect due to type of father absence was obtained (F = 3.50, d.f. = 2,42, p < .05). An examination of the mean scores shown in Table 6.11 revealed that the mean score obtained by the permanent father absence group was higher than the mean scores obtained by the intermittent and no absence groups. A comparison was made between the mean obtained by the permanent absence group and the means of the intermittent and no absence groups. A significant result was obtained (F = 7.00, d.f. = 1,42, p < .025). That is the incidence of behavioural and emotional problems was significantly higher in the permanent father absence group compared to the intermittent and no absence groups.

Using the table of total scores found in Appendix 3.3.4, the number of children who obtained total scores of 13 or more, the score considered to indicate the presence of psychiatric disorder (Rutter, Tizard & Whitmore, 1970), was calculated for each of the three absence groups, intermittent, permanent and no absence. The number of children in each absence group obtaining such a score may be found in Table 6.11.

Table 6.11

The number of children aged between eight and eleven years in each of the father absence groups obtaining a score of thirteen or more on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
13 or more	15	3	40	6	10	2
Less than 13	85	17	60	8	90	18
TOTAL	100	20	100	14	100	20

As the expected frequencies in two of the six cells were less than five a chi-squared test was not appropriate. Therefore two Fisher Exact Probability Tests were carried out on the data, one comparing the intermittent and no absence groups and the other comparing the permanent and no absence groups. No significant results were obtained ($p > .025$) that is, father absence had no effect on the incidence of psychiatric disorder.

(ii) Neuroticism and Anti-social Behaviour Sub-Scales:

A neuroticism sub-scale score was obtained for each child by summing scores obtained on items C, G, V, 6 and 15 ('suffers from asthma', 'had tears on arrival at school or refused to go into the building', 'does he/she have any sleeping difficulties?', 'often worried, worries about many things', 'tends to be fearful or afraid of new things or new situations'). Scores obtained by children on this sub-scale may be found in Appendix 3.3.5.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items III, 3, 13, 17 and 18 ('does he/she ever steal things?', 'often destroys own or others' property', 'is often disobedient', 'often tells lies', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.3.6.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores of 13 or more. Rutter, Tizard and Whitmore (1970) used the neurotic and anti-social behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorders according to which sub-scale score was the higher. Such a classification was carried out on those children obtaining total scores of 13 or more in the present study. Eleven children obtained such a score. The distribution of these children into neurotic or anti-social classifications was computed for each of the three father absence groups, permanent, intermittent or no absence and may be found in Table 6.12.

Table 6.12

The incidence of neurotic and anti-social disorder exhibited by children aged between eight and eleven years in each of the three father absence groups, as measured by the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	2	5	2
Anti-social	1	1	0

Total number of subjects = 11

Two Fisher Exact Probability Tests were carried out, one between the permanent father absence group and the no absence group and the other between the intermittent father absence group and the no absence group. No significant results were obtained ($p > .025$). That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

(iii) Analysis of individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2):

Five items of Scale A(2) were examined separately. One item referred to bed-wetting, one to stealing and three to peer relationships, all of which have been reported to be affected by father absence (Douglas, 1970; Gibson, 1969; Matthews, 1969; Stolz, 1954; Tiller, 1958).

The five items were:

In the section on Health Problems

D. Does your child wet the bed?

In the section on Habits

III. Does your child ever steal things?

In the Behaviour section

4. Frequently fights, is extremely quarrelsome with other children

5. Not much liked by other children

18. Bullies other children

The method of analysis was the same as that used in the examination of individual items of Scale A(2) and B(2) in the first study. That is data was split into two groups working class and middle class and responses were analysed by means of the Fisher Exact Probability Test. Children in the permanently father absent group were compared with children in the no father absence group and children in the intermittently absent group were compared with children in the no father absence group. Two by two matrices were constructed using one of the two combinations of absence on one dimension and a response of yes or no on the other. Tables of the data may be found in Appendices 3.3.7 and 3.3.8. No significant results were obtained ($p > .025$). That is father absence was not associated with different responses to any of the items of Scale A(2) examined separately.

A Summary of the Results Obtained from the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) for Children Aged Between Eight and Eleven Years

1. The incidence of emotional and behavioural problems was significantly higher in the permanent father absence group than in the intermittent and no father absence groups.

2. There was no significant difference between the permanent and no father absence groups nor between the intermittent and no father absence groups in the number of children obtaining a total score indicative of the presence of psychiatric disorder.

3. Father absence had no effect on the relative incidence of neurotic or anti-social disorder.

4. Father absence had no effect on the incidence of bed-wetting, poor peer relationships or stealing.

(b) Examination of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

(i) Total scores: Total scores obtained by the children may be found in Appendix 3.3.9. A summary of these scores showing the means and standard deviations obtained by each sub-group may be found in Table 6.13. A three-way analysis of variance was carried out on the scores. The three factors were type of father absence, intermittent, permanent and no absence; sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality

Table 6.13

Means and standard deviations of total scores obtained by children aged between eight and eleven years experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	4.80	11.67	1.80
		Standard Deviation	5.76	3.21	1.64
		Number of Subjects	5	3	5
	Working Class	Mean	0.0	3.40	5.40
		Standard Deviation	0.0	3.44	4.56
		Number of Subjects	5	5	5
FEMALES	Middle Class	Mean	3.00	3.67	3.20
		Standard Deviation	4.24	4.73	2.86
		Number of Subjects	5	3	5
		Mean	0.20	6.67	1.80
		Standard Deviation	0.45	5.13	2.05
		Number of Subjects	5	3	5
Total for all subjects in each absence group		Mean	2.00	5.93	3.05
		Standard Deviation	3.88	4.91	3.14
		Number of Subjects	20	14	20

in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis may be found in Table 6.14. A complete table of the results of the analysis may be found in Appendix 4.3.5.

Table 6.14

A summary of the results of the analysis of variance of the total scores obtained by children aged between eight and eleven years on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2), showing main effects and significant interactions

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	26.00	1	26.00	2.12	n.s.
Social Class (B)	40.64	1	40.64	3.14	n.s.
Type of Father Absence (C)	176.69	2	88.35	7.21	.01
A x B x C	142.69	2	71.34	5.83	.01
Subjects within Groups	514.40	42	12.25		

A significant main effect due to type of father absence was obtained (F = 7.21, d.f. = 2,42, p < .01). Father absence was also found to interact with social class and sex of child (F = 5.83, d.f. = 2,42, p < .025). This interaction was examined using an analysis of simple main effects of father absence for each combination

of levels of the sex and social class factors. The results of this analysis are shown in Table 6.15. Significant simple main effects were obtained for middle class boys (F = 8.95, d.f. = 2,42, p < .01) and for working class girls (F = 3.97, d.f. = 2,42; p < .05).

Table 6.15

The results of the analysis of simple main effects of type of father absence on the total scores obtained by children aged between five and seven years on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence, Middle Class Boys	219.32	2	109.66	8.95	.01
Type of Absence, Working Class Boys	63.89	2	31.95	2.61	n.s.
Type of Absence, Middle Class Girls	1.00	2	0.50	< 1	n.s.
Type of Absence, Working Class Girls	97.25	2	48.63	3.97	.05
Subjects within Groups	514.40	42	12.25		

Examination of the mean scores shown in Table 6.13 revealed that middle class boys experiencing permanent father absence obtained the highest mean score and those experiencing no father absence obtained the lowest. Comparisons were made between the intermittent absence and no absence groups together and the permanent absence group. A significant result was obtained ($F = 14.45$, d.f. = 1,42, $p < .01$) A further comparison was made between the intermittent and no absence groups. The result was not significant ($F = 1.58$, d.f. = 1,42, $p > .05$) That is, in the case of middle class boys, those in the permanent father absence group obtained higher total scores on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2), than did the intermittent and no father absence groups.

Examination of the mean scores shown in Table 6.13 revealed that the mean score obtained by working class girls whose fathers were permanently absent was higher than the mean scores obtained by working class girls whose fathers were intermittently or not absent. Comparisons were made between the intermittent and no absence groups together and the permanent absence group. A significant result was obtained ($F = 7.49$, d.f. = 1,42, $p < .01$). A further comparison was made between the intermittent father absence group and the no father absence group. The result was not significant ($F = 0.45$, d.f. = 1,42, $p > .05$). That is, in the case of working class girls those in the permanent father absence group obtained higher total scores on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2), than did the intermittent and no father absence groups.

Using the table of total scores found in Appendix 3.3.9, the number of children who obtained total scores of nine or more, the score considered to indicate the presence of psychiatric disorder (Rutter, 1967) was calculated for each of the three absence groups, permanent, intermittent or no father absence. The number of children in each absence group who obtained such a score may be found in Table 6.16.

Table 6.16

The number of children aged between eight and eleven years in each of the three father absence groups obtaining a score of nine or more on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Score	Intermittent Absence Group		Permanent Absence Group		No Absence Group	
	%		%		%	
9 or more	15	3	40	4	5	1
less than 9	85	17	60	10	95	19
TOTAL	100	20	100	14	100	20

Two Fisher Exact Probability Tests were carried out, one comparing the permanent absence group with the no absence group and the other comparing the intermittent absence group with the no absence group. No significant results were obtained ($p > .025$). That is, father absence had no effect on the incidence of psychiatric disorder.

(ii) Neuroticism and Anti-social Behaviour Sub-scales:

A neuroticism sub-scale score was obtained for each child by summing scores obtained on items 7, 10, 17 and 23 ('often worried, worries about many things', 'often appears miserable, unhappy, tearful or distressed', 'tends to be fearful or afraid of new things or new situations', 'has had tears on arrival at school or refuses to go into the building'). Scores obtained by children on this sub-scale may be found in Appendix 3.3.10.

An anti-social behaviour sub-scale score was obtained for each child by summing scores obtained on items 4, 5, 15, 19, 20 and 26 ('often destroys or damages own or others' property', 'frequently fights or is extremely quarrelsome with other children'. 'is often disobedient', 'often tells lies', 'has stolen things on one or more occasions in the past 12 months', 'bullies other children'). Scores obtained by children on this sub-scale may be found in Appendix 3.3.11.

An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained total scores of nine or more. Rutter (1967) used the neurotic and anti-social behaviour sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was carried out on those children obtaining total scores of nine or more in the present study. Eight children obtained such a score. One child in the permanent absence group obtained equal scores on the two sub-scales and were not included. The distribution of the remaining seven children into

neurotic or anti-social classifications was calculated for each of the three father absence groups, permanent, intermittent or no absence, and may be found in Table 6.17

Table 6.17

The incidence of neurotic and anti-social disorder exhibited by children aged between eight and eleven years in each of the three father absence groups, as measured by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group	Permanent Absence Group	No Absence Group
Neurotic	3	2	0
Anti-social	0	1	1

Total number of subjects = 7

Two Fisher Exact Probability Tests were carried out, one between the permanent absence group and the no absence group and one between the intermittent absence group and the no absence group. No significant results were obtained ($p > .025$). That is father absence had no effect on the relative incidence of neurotic and anti-social disorder.

(iii) Analysis of individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2):

Four items of Scale B(2) were examined separately. One item referred to stealing and three to peer relations, both of which have been

reported to be affected by father absence (Douglas, 1970, Gibson, 1969, Stolz, 1954, Tiller, 1958).

Items examined separately were:

5. Frequently fights or is extremely quarrelsome with other children
6. Not much liked by other children
7. Has stolen things on one or more occasions in the past twelve months
8. Bullies other children.

The method of analysis used was the same as that employed in the individual item analysis of Scale A(2). That is data was split into two groups, working class and middle class and responses were analysed by means of Fisher Exact Probability Tests. Children in the permanently absent group were compared with children in the no father absence group and children in the intermittent absence group were compared to those in the no father absence group. Two by two matrices were constructed using one of the two combinations on one dimension and a response of yes or no on the other. Tables of the data may be found in Appendices 3.3.12 and 3.3.13. No significant results were obtained. ($p > .025$). That is father absence was not associated with different responses to any of the items of Sbale B(2) examined separately.

A Summary of the Results Obtained from the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2) for Children Aged Between Eight and Eleven Years

1. Middle class boys experiencing permanent father absence exhibited a higher incidence of emotional and behavioural problems than did

middle class boys experiencing intermittent or no father absence.

2. Working class girls experiencing permanent father absence exhibited a higher incidence of emotional and behavioural problems than did working class girls experiencing intermittent or no father absence.

3. Father absence had no effect on the incidence of psychiatric disorder.

4. Father absence had no effect on the relative incidence of neurotic and anti-social disorder.

5. Father absence had no effect on the incidence of stealing or poor peer relationships.

(c) A Comparison between the Results of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) and the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

A Pearson Product Moment Correlation was carried out on the scores obtained by children aged between 8 and 11 years on the two scales. A correlation coefficient of 0.40 was obtained, which was not significant ($p > .05$). Fifteen children were classified as exhibiting psychiatric disorder on the basis of their scores on either scale. Of these four were so classified on both Scale A(2) and B(2).

A Discussion of the Results of the Investigation of Emotional and Behavioural Problems

Father absence has been cited as an important determinant of problem behaviour in children (Biller, 1971, 1974). However a review

of the research which has investigated father absence revealed that most of the findings put forward in support of this proposition have been obtained from children living apart from their fathers as a result of parental divorce. Studies exist which point to a link between absence of the father and anti-social behaviour (Douglas, 1970; Russell, 1957; Santrock, 1975; Tuckman & Regan, 1966; Wardle, 1961), anxiety (Koch, 1961), depression (Caplan & Douglas, 1969) and emotional maladjustment (Lecorgne & Laosa, 1976).

In the introduction to the present study it was predicted that the reason for the absence of the father would be an important factor in determining the effect on the child. It was suggested that absence of the father resulting from parental divorce would be more likely to have a detrimental effect on the child than would absence resulting from the demands of the father's occupation.

Intermittent absence of the father does have its difficulties. Studies of wives of servicemen have reported problems of loneliness and resentment (Duvall, 1945), depression (Matthews, 1969), discipline problems with children and problems associated with adjustment to the father's return (Matthews, 1969). Also, whilst the number of studies investigating the effects of intermittent or temporary absence of the father is small, there is some evidence that such absence does affect the child (Bach, 1946; Matthews, 1969; Stolz, 1954).

The problems experienced by families in which the parents are divorced are potentially much greater. Divorce is usually preceded by conflict, which may not only be difficult for the family whilst it is happening, but may also have a long term effect on the

participants (Marsden, 1969). After the divorce not only are there emotional difficulties such as depression and feelings of guilt experienced by the wives (Carter & Glick, 1970; Marsden, 1969), frequently there are economic and other practical problems to be faced (Brandwein et al, 1974; Finer, 1974; Marsden, 1969; Wynn, 1964).

The results of the study reported above provide no evidence for an association between intermittent absence of the father arising from the demands of his job and the increased incidence of emotional and behavioural problems in his child. No differences were found in the incidence of such problems when children whose fathers were in the Royal Navy and therefore absent intermittently were compared with children whose fathers were not absent. This was the case with children aged between 5 and 7 years and with children aged between 8 and 11 years.

This finding is in conflict with those obtained from other studies of temporary or intermittent absence of the father. However, when these earlier studies are examined the reasons for the diagreement between the results become apparent. Studies of children whose fathers were absent because of war service (Bach, 1946; Stolz, 1954) differ from the present investigation. When men are absent during wartime their wives might be concerned about their safety and this concern would make the absence a more stressful experience than if it were simply part of the routine of the man's occupation. Also, in many instances absence during wartime meant prolonged absence continuing throughout the wives' pregnancies, the births of the children and their early childhood. As Stolz (1954) has pointed out,

problems that the fathers and children had in adjusting to each other were more significant than the absence of the fathers in the children's earlier years. A study by Matthews (1969) did compare children whose fathers were peacetime members of the Royal Navy with children whose fathers were not. However his sample was selected from children referred to a child guidance clinic whilst in the present study the sample was selected from a more general population. It would appear therefore that the differences between children already diagnosed as having some emotional or behavioural disorder did not reflect differences present in a more general population.

Whilst in the present study no evidence was found for a link between intermittent absence of the father and an increase in the incidence of behaviour problems in children, there was an indication in the first study of children aged between 5 and 7 years that such an effect might exist. Working class girls whose fathers were in the Royal Navy were reported by their mothers to exhibit more emotional and behavioural problems than did working class girls whose fathers were never away. It was stated, when the results of the first investigation were discussed in Chapter Three, that this finding was unexpected. In earlier studies it was boys who were found to be affected by temporary or intermittent absence of the father (Bach, 1946; Stolz, 1954). Also the result was obtained from data from only five working class girls whose fathers were intermittently away. Therefore replication was necessary before it could be ascertained that intermittent absence of the father consistently affected working class girls. The failure to replicate the finding either in the case

of a second group of girls aged between 5 and 7 years or in girls aged between 8 and 11 years indicated that no such consistent effect could be demonstrated. It could only be concluded that the initial finding was not indicative of the effect of intermittent absence on working class girls but was due to some chance factor.

Thus no evidence was produced from the investigation of emotional and behavioural problems that intermittent absence of the father resulted in a higher incidence of these problems than were exhibited by children whose fathers had never been away. Also when the incidence of psychiatric disorder was examined no differences were found between these two groups of children. The incidence of psychiatric disorder in both samples of children aged between 5 and 7 years and the sample of children aged between 8 and 11 years was always highest in the children of divorced parents. This was so, both in the case of mothers' and of teachers' reports. The teachers' reports indicated that there was little difference in the incidence of psychiatric disorder exhibited by the naval and non-naval children. However, whilst the incidence of disorder in these two groups as indicated by the reports of the mothers, was also not significantly different, in the two samples of children aged between 5 and 7 years the incidence of disorder in the naval sample was higher than that in the general population. Rutter and Madge (1976) report that the incidence of psychiatric disorder found in children in the general population is between 5% and 10%. In the first study of children aged between 5 and 7 years 35% of naval children and 11% of non-naval children appeared to exhibit problems severe enough to indicate disorder, whilst in the second sample of

children of the same age the figures were 25% compared to 6%. In the children aged between 8 and 11 years the trend was not so marked. Here the figures were 15% and 10%.

These results indicate that while the difference between the naval and non-naval children in the incidence of psychiatric disorder they exhibited was not significant, in both samples of children aged between 5 and 7 years the incidence observed in the naval children was much higher than that in the general population. Examination of a larger sample of naval children would be necessary to establish whether the incidence of disorder is higher in naval, rather than non-naval children.

In the first investigation reported in Chapters Two and Three, permanent absence of the father was found to be associated with an increased incidence of problems in mothers' reports of working class girls and teachers' reports of middle class boys. Also whilst the difference in incidence of psychiatric disorder between the three groups was not significant, a trend was observed in both mothers' and teachers' reports indicating a higher incidence in children of divorced parents. It was predicted that the effects of permanent father absence would appear more consistently amongst an older group of children aged between 8 and 11 years.

This prediction was confirmed by the results of the second study. Permanent absence of the father resulting from parental divorce was found to be associated with a higher incidence of emotional and behavioural problems in children. Children aged between 5 and 7 years and children aged between 8 and 11 years were found to be affected. However, the effects were more consistently found in the older children. Amongst the older age level, mothers of children of both

sexes and of both middle and working classes whose fathers were permanently absent reported a higher incidence of problems. Teachers reported that middle class boys and working class girls whose fathers were permanently away exhibited a greater number of problems than did children of the same sex and social class whose fathers were away intermittently or not away at all. In addition, whilst no significant differences were found between the three absence groups the trend visible in the other two samples was present. The incidence of psychiatric disorder indicated from teachers' and parents' reports was highest in the children of divorced parents.

In the second study of children aged between 5 and 7 years no differences were found between the children in the overall incidence of behaviour and emotional problems reported by mothers or teachers. A difference was found, however, in mothers' reports of problems numerous enough to be indicative of psychiatric disorder. More children whose fathers were absent permanently exhibited psychiatric disorder compared to those whose fathers were away intermittently or not away at all.

Findings about children of a particular sex and social class are far less consistent and caution must be exercised in making an attempt to generalise from the small numbers of children who made up the individual sex - social class - type of absence sub-groups. However some indications may be detected from the scores obtained on the Children's Behaviour Questionnaires for Completion by Parents and Teachers. In order to supplement findings obtained from individual samples the data from all three samples of children were pooled

together and the incidence of psychiatric disorder as indicated by parents' and teachers' reports was calculated. Tables of these data may be found in Appendix 6.1.1 and 6.1.2.

When all the results were examined together it became clear that middle class boys and working class girls appeared most affected by permanent absence of the father. Mothers' reports indicated that working class boys from the divorced families had a higher incidence of psychiatric disorder, but this was not apparent from teachers' reports. In the latter all working class boys regardless of absence experience appeared to exhibit a high incidence of problems. Davie et al (1972) also reported that working class boys were seen by teachers as exhibiting the highest number of problems. The only group of children who appeared not to be affected by absence of the father was that of middle class girls. Explanations that might account for the differences found in the different sub-groups of children will be considered when the environment of the children is examined in more detail in Chapter Seven.

Many previous studies have linked absence of the father resulting from parental divorce with anti-social behaviour, particularly in working class boys, and these studies were examined in Chapter One. Two measures of anti-social behaviour were included in the present investigation. One was an examination of the incidence of psychiatric disorder classified as anti-social and the other was an examination of the incidence of stealing. Absence of the father had no effect on either of these measures. Reasons for the failure to find a link between anti-social behaviour and absence of the father need to be examined.

That it is absence of the father itself that results in a higher incidence of anti-social behaviour has been questioned. Crime statistics indicate that the proportion of delinquents is highest in the lowest socioeconomic status groups (Douglas, 1970; Herzog & Sudia, 1970). Therefore it is necessary, when investigating the association between father absence and anti-social behaviour and delinquency, to ensure that the control group is of equivalent socioeconomic status. However, Herzog and Sudia (1970) point out that such matching is difficult to achieve. For example, in studies of delinquency information about delinquents and their families may be obtained from the courts. Control groups must first be persuaded to cooperate and then to give accurate information. Families who are most severely disadvantaged are least likely to cooperate. Therefore control groups may come from the more prosperous section of the working class and not from the lowest status groups where the incidence of delinquency is highest. As the incidence of permanent father absence due to divorce or separation is highest amongst these people, then the association between father absence and delinquency may be made, when, in fact it is socioeconomic status which is the most important factor. The failure to find differences in anti-social behaviour attributable to father absence may, in part be due to the more adequate social class matching of the samples.

Environmental variables, other than the absence itself, but which may accompany or precede father absence have also been reported as relevant. For example Rutter (1971) provides evidence that conflict in the home is a more important determinant of anti-social behaviour

than is absence of the father. Studies exist which demonstrate that even when the home is not broken, parental discord is associated with anti-social behaviour (Craig & Glick, 1965; McCord & McCord, 1959; Tait & Hodges, 1962). Both McCord, McCord and Thurber (1962) and Rutter (1971) found that the incidence of anti-social behaviour was higher in unhappy unbroken homes than in stable broken ones. Further evidence supporting the hypothesis that conflict is more important than absence itself comes from studies which have found that the incidence of anti-social behaviour increases the later the marriage break occurred (Anderson, 1968; McCord, McCord & Thurber, 1962). The results of this study too might be explained in this way. All children whose fathers had been absent permanently had been without them since before the age of 5 years. Thus they had not been exposed to marital conflict for amounts of time ranging from 1 to 5 years.

One final point that must be made is that even in the 8 to 11 year old age group the children might have been too young for anti-social behaviour serious enough to be reported to occur. The time at which delinquency rates are highest is during adolescence (Wolfgang, 1976). A further study of adolescents of this age from homes in which the parents were divorced would be necessary to test this point.

No evidence was found for a link between father absence and poor peer relationships. Evidence from previous studies was contradictory, some reporting difficulties (Stolz, 1954; Tiller, 1958) and others not (Steinberg, 1974). It has been suggested that one cause of difficulties in peer relationships, in this case in children of naval families may be their greater geographical mobility (Matthews, 1969). One parent

families too may experience frequent moves (Brandwein et al, 1974). It could be expected that one reason for the association between mobility and problems in friendships might be that as they change schools when they move their opportunity to form stable relationships with their peers is limited. It will be shown in the next chapter, that no differences existed between the children in the number of schools they attended. This therefore might be the reason for the failure to find differences between the children in their peer relationships.

One final result to be noted was that no link was found between absence of the father and enuresis. Matthews (1969) examining children who had been referred to a child guidance clinic reported that children from naval families were less likely to be enuretic than were children from non-naval families. Douglas (1970) found an increased incidence of enuresis associated with family disruption. The failure to find either of these results in the present study may be due in the first case to the fact that Matthews' (1969) sample was selected from child guidance clinic patients, whilst in the present study children were selected from a more general population. In the second case, as absence of the father had occurred in the children from divorced homes at least one year before the study, the effects of that disruption may have disappeared.

Before considering the implications of these findings results obtained from the present study not concerning the effects of father absence will be dealt with. Firstly, when the incidence of behaviour problems in children aged between 5 and 7 years was examined it was

found that mothers' reports of problems varied with the sex of children and their social class. The differences between male and female middle class children and male and female working class children were not large, nor were there significant social class differences between middle class and working class males nor between middle class and working class females. However, the pattern that emerged was of interest. Mothers of middle class boys reported a higher incidence of problems than did mothers of working class boys, whilst mothers of working class girls reported a higher incidence of problems than did mothers of middle class girls. When teachers' reports were examined, the social class of the child had no effect, but boys were reported as exhibiting more problems than girls.

The finding that teachers report boys to exhibit more problem behaviour than girls may be due to the fact that the types of problems experienced by the two sexes have been shown to differ. Boys are more likely to exhibit behaviour related to aggressiveness and anti-social behaviour, whilst girls are more likely to exhibit problems relating to anxiety such as miserableness, nail biting and poor appetite (Davie et al, 1972; Gregory, 1965; Maccoby & Jacklin, 1974). It has been suggested that teachers are more likely to notice aggressive behaviour such as that more often exhibited by boys than they are to notice symptoms of anxiety as the former would be more likely to disrupt the classroom (Davie et al, 1972).

The results obtained from the mothers' reports require a more complex explanation. It has been stated that boys are more likely than girls to exhibit aggressive and anti-social behaviour (Bee, 1975;

Davie et al, 1972; Gregory, 1965). It has also been noticed that working class mothers are more tolerant of aggressive behaviour than are middle class mothers (Davie et al, 1972; Newson & Newson, 1968) and this might explain why the incidence of problems reported by working class mothers of boys was lower than that reported by middle class mothers of boys. That middle class girls are reported as exhibiting fewer problems than working class girls may reflect the finding that working class children have been reported to exhibit more behaviour problems than middle class children (Davie et al, 1972). However some studies exist that have not demonstrated such class differences (e.g. Richman, Stevenson & Graham, 1975). Another possible explanation may be that working class mothers are more likely to report the anxiety symptoms most often found in girls. However no evidence in support of this is available.

When the results obtained from the Children's Behaviour Questionnaire for Completion by Parents and the Questionnaire for Completion by Teachers for children aged between 5 and 7 years were compared a correlation coefficient of 0.32 was obtained, which was not significant. Three children were found to have obtained a score of 13 or more on the parental questionnaire as well as obtaining scores of nine or more on the teachers questionnaire. These scores indicated that the presence of psychiatric disorder was likely (Rutter, Tizard & Whitmore, 1970). Therefore of the 16 children obtaining high scores on either scale 18.75% obtained high scores on both.

Similar results were obtained for children aged between 8 and 11 years. The correlation between the two measures was 0.40 which was not

significant. Four children obtained scores of 13 or more on the parental questionnaire as well as obtaining a score of nine or more on the teachers' questionnaire. Therefore of the 15 children obtaining high scores on either scale 26.7% obtained high scores on both.

Discrepancies between parents' and teachers' reports are common (Davie et al, 1972; Rutter, Tizard & Whitmore, 1970) and were also found in the first study. Lack of agreement between the measures need not indicate that they are not valid. The validity of the scales employed in the present study has been established (Rutter, 1967; Rutter, Tizard & Whitmore, 1970). Reasons for the differences in parents' and teachers' reports have been discussed in Chapter Three and so will only be mentioned briefly here. Behaviour may be situation specific or need to be more severe to be noted by teachers. Anti-social behaviour may be more likely to be noticed by teachers because of its disruptive effect on the classroom. Items may be interpreted differently by parents and teachers and finally a mother might emphasise problems if her child is causing her anxiety or if she herself has emotional and practical problems.

The findings of this investigation have demonstrated that father absence resulting from parental divorce has a greater effect on the incidence of emotional and behavioural problems exhibited by children, than intermittent absence resulting from his occupation.
In order to establish why the outcome of absence resulting from divorce was different from absence resulting from occupation a number of possible explanations need to be examined. These explanations may

be divided into two categories. Firstly there are those which stress the effects of fatherlessness and secondly there are those which stress changes in the child's environment which follow from the father's absence but are not directly concerned with aspects of fathering.

Those who consider the first type of explanation to be of most relevance refer to concepts such as 'Parental Deprivation' and their approach is similar to that of the early research into maternal absence (Biller, 1974). The father is seen as fulfilling a number of important functions and when he is absent these functions cannot be fulfilled adequately by anyone else. For example the father is seen as the most important parent in fostering the child's moral development (Biller, 1974) and in the sex role development of boys (Freud, 1924; R.R. Sears, 1957) and girls (Mischel, 1966).

If the theories that stress the necessity of the presence of the father for the normal development of the child were correct, then any prolonged absence, whatever the reason, would result in problems for the child. However, evidence from the present study and from other research suggests that this is not so. In the present study the reason for the absence of the father was important in determining the extent of the effect on the incidence of emotional and behavioural problems in the children. Other studies have compared absence of the father resulting from his death with absence resulting from divorce or separation of the parents and again it is absence resulting from divorce that is most detrimental (Glueck & Glueck, 1950; Gregory, 1965; Tuckman & Regan, 1966).

The possibility must be considered that the difference between the

children experiencing permanent and intermittent absence of the father was due to the fact that the total time the children were deprived of fathering was greater for the permanent absence group. All children in both absence groups had experienced at least one year's absence before they reached the age of 5 years. However, in the divorced group the absence was continuous after the onset, whilst in the naval group it was intermittent and therefore of shorter duration. Some evidence for this possibility is provided because in the present study children aged between 8 and 11 years were found to be more consistently affected by permanent father absence than were children aged between 5 and 7 years. Against this are two points. The first of these is that the trend observed indicating that the incidence of psychiatric disorder in the naval children was higher than the 5 - 10% reported in the general population (Rutter & Madge, 1976), was only present in those aged between 5 and 7 years. As intermittent absence of the father is a continuing feature of naval life, if the duration of the absence was important it would be expected that the incidence of psychiatric disorder would be even higher in the older naval children who had experienced intermittent absence more frequently. Also, if duration of absence was the important factor then there would be no reason why children should not be equally affected by father absence resulting from parental divorce and that resulting from the father's death as long as the length of absence was the same. However, as has already been stated this is not the case. Absence due to paternal death does not affect children to the same extent as absence resulting from divorce (Glueck & Glueck, 1950; Gregory, 1965; Tuckman & Regan, 1966).

A further explanation emphasising deprivation of fathering refers to what might be termed psychological absence. The family of a man absent because of his occupation is aware that the absence is not permanent. In spite of being physically away he is still a member of the family unit. Even whilst away he is still included. Mothers in the present study reported children looking forward to their fathers' return, writing and waiting for letters. When parents are divorced and the father is not living in the home he is no longer part of the family unit, is not included by that unit in plans or activities. The father may have access to his children but his role is of an outsider. This qualitative difference in the two types of absence might account for the difference in the effect on the children. It might be that only when the absence results in psychological absence from the family is a child really fatherless, and it is being fatherless in this sense that gives rise to problems in the children. If this were so it would be expected that the problems of children in naval families would be no higher than those of non-naval children, whilst the effects of separation due to death would be as great as those of separation due to divorce. This is not the case.

If factors associated with the concept of paternal deprivation cannot account for the findings then explanations which concentrate on other changes in the child's environment which are associated with different types of father absence need to be examined. The potential for difficulty and disruption in the child's environment is greater after divorce than when absence results from the father's occupation. Some of these difficulties have already been referred to and include

emotional problems experienced by the mothers after the divorce Marsden, 1969; Wynn, 1964) and practical problems such as economic hardship (Brandwein et al, 1974; Finer, 1974). Many of the problems faced by the single parent family continue throughout the early life of the children even when the family has no problems the network of interaction within such a unit might change.

In the next chapter the current environment of the families and interaction between the mothers and their children will be examined. Attempts will be made to account for the association between permanent absence of the father and an increased incidence of emotional and behavioural problems and also for the finding that children aged between 8 and 11 years appear more consistently affected by that absence than are children aged between 5 and 7 years. In addition the environment of the naval children will be examined in an attempt to account for the fact that some children aged between 5 and 7 years appeared to be affected by intermittent absence of the father, but no affect could be discovered in children aged between 8 and 11 years.

CHAPTER SEVEN

THE CHILDREN IN THEIR ENVIRONMENT

The way in which mothers interacted with their children was examined using the Index of Communication and Control (Brandis & Henderson, 1970). The Index was made up of four components, Schedules D, E and F and a Control Questionnaire. Schedule D examined mothers' opinions about the functions of toys. Schedule E examined how mothers dealt with their children when they asked difficult questions, Schedule F examined how willing mothers were to chatter with their children when the children initiated the interaction. Finally the Control Questionnaire examined how mothers dealt with their children when they exhibited different behavioural problems. Other aspects of the experience and environment of the children were examined by means of the Biographical and Environmental Questionnaire. Copies of the four components of the Index and of the Biographical and Environmental Questionnaire may be found in Appendix 2.

In the investigation 52 children aged between 5 and 7 years and 54 children aged between 8 and 11 years were studied.

1. The Results of the Investigation of Children Aged Between Five and Seven Years

(a) The Index of Communication and Control

(i) Schedule D: Schedule D examined mothers' opinions about the functions of toys. A high score on this schedule indicated that mothers emphasised the importance of child orientated, educational functions and a low score indicated that mothers emphasised the importance of toys as a means of keeping their children occupied and away from them.

The scores obtained by mothers on Schedule D may be found in Appendix 3.2.14. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.1. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child, and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant interactions may be found in Table 7.2. A complete table of the results of the analysis may be found in Appendix 4.2.6.

Table 7.1

Means and standard deviations of scores obtained by mothers of children aged between five and seven years on Schedule D of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	10.60	11.00	10.20
		Standard Deviation	0.89	0.00	0.84
		Number of Subjects	5	3	5
	Working Class	Mean	9.60	7.20	10.75
		Standard Deviation	1.34	3.63	0.50
		Number of Subjects	5	5	4
FEMALES	Middle Class	Mean	9.60	9.33	10.75
		Standard Deviation	1.34	0.58	0.50
		Number of Subjects	5	3	4
	Working Class	Mean	8.60	10.50	8.50
		Standard Deviation	1.67	1.00	2.38
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	9.60	9.27	10.06
		Standard Deviation	1.42	2.58	1.48
		Number of Subjects	20	15	17

Table 7.2

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between five and seven years on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	1.49	1	1.49	< 1	n.s.
Social Class (B)	13.99	1	13.99	5.25	.05
Type of Father Absence (C)	2.81	2	1.41	< 1	n.s.
A x B x C	32.39	2	16.19	6.08	.01
Subjects within groups	106.57	40	2.66		

Overall there was no effect due to type of father absence (F = <1, d.f. = 2,40, p > .05). However, this factor did interact with social class and sex of child (F = 6.08, d.f. = 2,40, p < .01). An analysis of simple main effects of type of father absence was carried out for each combination of levels of the sex and social class factors. The result of this analysis may be found in Table 7.3. A significant effect was found for working class boys (F = 5.15, d.f. = 2,40, p < .025). Two comparisons between means were carried out, one comparing the permanent absence group with the no absence group and the other comparing the intermittent absence group with the no absence group. The difference between the permanent and no father absence

Table 7.3

The results of the analysis of simple main effects of type of father absence on the scores of mothers of children aged between five and seven years on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Type of Absence x Middle Class Boys	1.34	2	0.67	< 1	n.s.
Type of Absence x Working Class Boys	27.46	2	13.73	5.15	.025
Type of Absence x Middle Class Girls	4.52	2	2.26	0.85	n.s.
Type of Absence x Working Class Girls	10.63	2	5.32	2.00	n.s.
Subjects within groups	106.56	40	2.66		

groups was significant ($F = 9.92$, d.f. = 1,40, $p < .01$). The difference between the intermittent and no father absence groups was not significant ($F = 1.04$, d.f. = 1,40, $p > .025$). That is mothers whose husbands were permanently absent were more likely to see toys as a means of keeping their children occupied rather than having an educational function, compared to mothers whose husbands were not absent. There

was no difference between mothers whose husbands were intermittently absent and those whose husbands were not absent.

A significant main effect due to social class was obtained (F = 5.25, d.f. = 1,40, p < .05) and this factor interacted with sex of child and type of father absence (F = 6.08, d.f. = 2,40, p < .01). The simple main effects of social class were examined for each combination of levels of the sex and type of father absence factors. The results of this analysis may be found in Appendix 5.3.1. A significant result was obtained for males experiencing permanent father absence (F = 11.36, d.f. = 1, p < .01). That is middle class mothers of boys whose husbands were permanently absent viewed toys as educational and child orientated. Working class mothers of boys whose husbands were permanently absent viewed toys as a means of keeping their children occupied.

(ii) Schedule E: Schedule E examined how mothers dealt with their children when they asked difficult questions. A high score on the schedule indicated that mothers would attempt to answer difficult questions whilst a low score indicated that mothers would attempt to avoid answering such questions.

The scores obtained by mothers on Schedule E may be found in Appendix 3.2.15. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.4. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence -

Table 7.4

Means and standard deviations of scores obtained by mothers of children aged between five and seven years on Schedule E of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	2.80	3.33	3.20
		Standard Deviation	1.48	2.08	1.30
		Number of Subjects	5	3	5
	Working Class	Mean	3.60	3.60	3.25
		Standard Deviation	1.14	0.89	1.26
		Number of Subjects	5	5	4
FEMALES	Middle Class	Mean	4.60	5.00	3.50
		Standard Deviation	0.89	1.00	0.58
		Number of Subjects	5	3	4
	Working Class	Mean	3.80	3.25	4.00
		Standard Deviation	0.83	2.06	1.15
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	3.70	3.73	3.47
		Standard Deviation	1.22	1.53	1.07
		Number of Subjects	20	15	17

sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects may be found in Table 7.5. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.2.7.

Table 7.5

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between five and seven years on Schedule E of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	6.66	1	6.66	4.22	.05
Social Class (B)	0.30	1	0.30	< 1	n.s.
Type of Father Absence (C)	0.83	2	0.42	< 1	n.s.
Subjects within groups	63.17	40	1.58		

Overall there was no effect due to type of father absence (F =<1, d.f. = 2,40, p > .05) and this factor did not interact with any other factor.

A significant main effect due to sex of child was obtained (F = 4.22, d.f. = 1,40, p < .05). An examination of Table 7.5 indicated that mothers of boys were more likely to avoid answering difficult questions than were mothers of girls.

(iii) Schedule F: Schedule F examined how willing were mothers to chatter with their children when their children initiated the interaction. A high score on this schedule indicated that mothers were willing to chatter with their children whilst a low score indicated that they were not willing to do so.

The scores obtained by mothers on Schedule F may be found in Appendix 3.2.16. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.6. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects and significant interactions may be found in Table 7.7. A complete table of the results of the analysis may be found in Appendix 4.2.8.

Overall there was no effect due to type of father absence (F =<1, d.f. = 2,40, p > .05). However this factor did interact with sex of child (F = 3.68, d.f. = 2,40, p < .05).

Table 7.6

Means and standard deviations of scores obtained by mothers of children aged between five and seven years on Schedule F of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	14.00	16.00	15.00
		Standard Deviation	2.83	1.73	1.22
		Number of Subjects	5	3	5
	Working Class	Mean	10.00	13.00	14.25
		Standard Deviation	1.87	3.81	0.96
		Number of Subjects	5	5	4
FEMALES	Middle Class	Mean	16.20	16.00	15.25
		Standard Deviation	0.84	2.65	1.71
		Number of Subjects	5	3	4
	Working Class	Mean	15.40	11.75	15.50
		Standard Deviation	1.52	4.27	2.89
		Number of Subjects	5	4	4
Total for all subjects in each absence group		Mean	13.90	13.87	15.00
		Standard Deviation	3.01	3.60	1.70
		Number of Subjects	20	15	17

Table 7.7

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between five and seven years on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	21.50	1	21.50	3.60	n.s.
Social Class (B)	54.94	1	54.94	9.42	.01
Type of Father Absence (C)	10.90	2	5.45	< 1	n.s.
A x C	42.94	2	21.47	3.68	.05
Subjects within groups	233.25	40	5.83		

An analysis of simple main effects of type of father absence was carried out for males and females. The results of this analysis are shown in Table 7.8. No significant simple main effects were obtained. An analysis of simple main effects of sex of child was carried out for each type of father absence and yielded a significant result for children experiencing intermittent father absence (F = 10.17, d.f. = 1,40, p < .01). The results of this analysis are shown in Appendix 5.3.2. Examination of mean scores in Table 7.7 revealed that mothers of girls obtained higher scores on Schedule F than did mothers of boys. That is in families from which the fathers were intermittently absent mothers of girls chattered to their children more than did mothers of boys.

Table 7.8

The results of the analysis of simple main effects of type of father absence on the scores of mothers of children aged between five and seven years on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	*F*	Significance level
Type of absence, Male	36.71	2	18.36	2.91	n.s.
Type of absence, Female	17.12	2	8.56	1.47	n.s.
Subjects within groups	233.24	40	5.83		

A further significant main effect of social class was obtained ($F = 9.42$, d.f. = 1,40, $p < .01$). Middle class mothers obtained higher scores on Schedule F than did working class mothers. That is middle class mothers were more likely to chatter to their children than were working class mothers.

(iv) The Control Questionnaire: The Control Questionnaire examined how mothers dealt with their children when they exhibited different behavioural problems. The scoring method employed by Brandis and Henderson was very complex. It entailed phrase by phrase analysis of verbatim responses and enabled detailed coding of mothers' replies to the questionnaire. Such a detailed analysis was beyond the

resources of the present study. It was decided, therefore to employ a simplified coding technique and assess the frequency of use of three strategies by mothers, avoidance, punishment and support. The number of times that mothers used each strategy over all six items was counted and the total number of times each strategy was used by each type of father absence - social class - sex of child sub-group was calculated. Means were then calculated for each sub-group and each strategy and the results of this procedure are shown in Table 7.9.

Three Kruskal-Wallis Tests were performed, one for each strategy to compare the use of each strategy by mothers in the three absence groups, permanent, intermittent and no absence. The result of the test for the Avoidance Strategy was not significant ($H = 0.78$, d.f. = 2, $p > .05$). The result for the Punishment Strategy was not significant ($H = 3.66$, d.f. = 2, $p > .05$). The result for the Support Strategy was not significant ($H = 2.15$, d.f. = 2, $p > .05$). That is father absence had no effect on the use of three strategies avoidance, punishment and support, by mothers when their children exhibited problem behaviour.

A Summary of the Results Obtained from the Index of Communication and Control

1. Amongst working class mothers of boys, those whose husbands were permanently absent were likely to view toys as a means of keeping their sons occupied than were mothers whose husbands were present. Mothers whose husbands were present were more likely to view toys as having an educational, child-orientated function. Amongst working class mothers

Table 7.9

The mean incidence of use by mothers of children aged between five and seven years of avoidance, punishment and support strategies in their responses to the Control Questionnaire

RESPONSE	ABSENCE GROUP	MALES				FEMALES			
		Middle Class		Working Class		Middle Class		Working Class	
		Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects
Avoidance	Intermittent	0.20	5	1.00	5	0.20	5	0.40	5
	Permanent	0.00	3	1.00	5	0.33	3	0.50	4
	No	0.40	5	0.00	4	0.00	4	0.50	4
Punishment	Intermittent	1.60	5	2.00	5	1.60	5	2.20	5
	Permanent	2.33	3	3.40	5	2.33	3	2.00	4
	No	1.80	5	2.50	4	1.20	4	2.00	4
Support	Intermittent	4.20	5	3.00	5	4.20	5	3.40	5
	Permanent	3.66	3	3.40	5	2.33	3	2.00	4
	No	3.80	5	2.75	4	4.75	4	3.00	4

of boys there was no difference between mothers whose husbands were intermittently absent and those whose husbands were not absent in their opinions about the functions of toys.

2. Amongst mothers of boys whose husbands were permanently absent those in the middle class were more likely to view toys as having educational and child orientated functions whilst those in the working class were more likely to view toys as a means of keeping their children occupied.

3. Father absence had no effect on the willingness of mothers to answer difficult questions put by their children.

4. Mothers of girls were more willing to answer difficult questions put by their daughters than were mothers of boys willing to answer difficult questions put by their sons.

5. In families from which the fathers were intermittently absent mothers of girls were more willing to chatter with their daughters than were mothers of boys willing to chatter with their sons.

6. Middle class mothers were more willing to chatter with their children than were working class mothers.

7. Father absence had no effect on the use by mothers of avoidance, punishment and support strategies when their children exhibited behaviour problems.

(b) The Biographical and Environmental Questionnaire

During the course of the interview with the mothers the researcher completed the Biographical and Environmental Questionnaire. Eleven items of the questionnaire were subjected to statistical analysis. These items were:

10. How many schools has the child attended?

11. Is the child happy at school?

13a. Does the mother read with the child?

13b. Does the father read with the child?

14a. Does the mother take the child on outings?

14b. Does the father take the child on outings?

15. Does the father take a big part in managing the child?

18. Has the mother been in paid work since the birth of the child?

19. Do you own your own house?

20. Are there any practical problems experienced by the mother due to father absence?

21. Are there any emotional problems experienced by the mother due to father absence?

Middle class and working class responses were examined separately. The data was not subdivided by sex of child in addition to social class as to have done so would have been to reduce the numbers in each sub-group to an unacceptably low level. In the case of items 10, 11, 13a, 14a, 18 and 19 the permanent absence group was compared with the no absence group and the intermittent absence group was compared to the no absence group. In the case of items 13b, 14b, and 15 the intermittent absence group was compared to the no absence group. In the case of items 20 and 21 the permanent absence group was compared with the intermittent absence group.

Fisher Exact Probability Tests were carried out on the data, copies of which may be found in Appendices 3.18 and 3.19. One significant result was obtained. In the working class group families from which the father was permanently absent were less likely to own their own house than were working class families from which the father was not absent ($p < .025$). Father absence had no effect on the responses to any other items ($p > .025$).

When the responses to items 20 and 21 were examined it was found that in the middle class 83% of divorced women reported practical problems resulting from the divorce and 66% reported emotional problems. In the group of naval wives 80% reported experiencing practical problems and 60% emotional problems as a result of their husband's absence. In the working class 89% of divorced women reported emotional problems and 89% practical problems. In the group of naval wives 80% reported practical problems and 70% emotional problems while their husbands were away. Finally, divorced women were asked if the children's fathers maintained regular contact with them. Contact was maintained in the case of two middle class boys and one working class boy.

A Summary of the Results of the Biographical and Environmental Questionnaire for Children Aged Between Five and Seven Years

1. Working class families from which the father was permanently absent were less likely to own their own house than were working class families from which the father was not absent.

2. 83% of middle class mothers whose husbands were permanently absent reported practical problems and 66% reported emotional problems associated with that absence.

3. 80% of middle class mothers whose husbands were intermittently absent reported practical problems and 60% reported emotional problems associated with the absence.

4. 89% of working class mothers whose husbands were permanently absent reported practical problems and 89% reported emotional problems due to the absence.

5. 80% of working class mothers whose husbands were intermittently absent reported practical problems and 70% reported emotional problems resulting from the absence.

2. The Results of the Investigation of Children Aged Between Eight and Eleven Years

(a) The Index of Communication and Control

(i) Schedule D: Schedule D examined mothers' opinions about the functions of toys. A high score on this schedule indicated that mothers emphasised the importance of child orientated, educational functions and a low score indicated that mothers emphasised the importance of toys as a means of keeping their children occupied and away from them.

The scores obtained by mothers on Schedule D may be found in Appendix 3.3.14. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.10. A three-

Table 7.10

Means and standard deviations of scores obtained by mothers of children aged between eight and eleven years on Schedule D of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	8.60	10.67	10.20
		Standard Deviation	2.30	0.58	1.30
		Number of Subjects	5	3	5
	Working Class	Mean	9.40	8.60	8.20
		Standard Deviation	1.14	0.89	1.48
		Number of Subjects	5	5	5
FEMALES	Middle Class	Mean	11.00	10.00	9.20
		Standard Deviation	0.00	1.00	1.92
		Number of Subjects	5	3	5
	Working Class	Mean	11.00	11.00	9.60
		Standard Deviation	0.00	0.00	1.52
		Number of Subjects	5	3	5
Total for all subjects in each absence group		Mean	10.00	9.79	9.30
		Standard Deviation	1.59	1.19	1.63
		Number of Subjects	20	14	20

way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects may be found in Table 7.11. There were no significant interactions. A complete Table of the results of the analysis may be found in Appendix 4.3.6.

Table 7.11

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between eight and eleven years on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	*F*	Significance level
Sex (A)	14.94	1	14.94	8.73	.01
Social Class (B)	0.84	1	0.84	< 1	n.s.
Type of Father Absence (C)	5.47	2	2.74	1.60	n.s.
Subjects within groups	71.87	42	1.71		

Overall there was no effect due to father absence (F = 1.60, d.f. = 2,42, p > .05) and this factor did not interact with any other factor.

A significant main effect of sex of child was obtained (F = 8.73, d.f. = 1,42, p < .01). Examination of Table 7.10 revealed that mothers of girls obtained a higher score on Schedule D than did mothers of boys. That is mothers of girls were more likely to view toys as having an educational child orientated function whilst mothers of boys were more likely to view toys as a means of keeping their sons occupied.

(ii) Schedule E: Schedule E examined how mothers dealt with their children when they asked difficult questions. A high score on the schedule indicated that mothers would attempt to answer difficult questions whilst a low score indicated that mothers would attempt to avoid answering such questions.

The scores obtained by mothers on Schedule E may be found in Appendix 3.3.15. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.12. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main

Table 7.12

Means and standard deviations of scores obtained by mothers of children aged between eight and eleven years on Schedule E of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	4.20	4.00	3.80
		Standard Deviation	1.10	0.00	0.45
		Number of Subjects	5	3	5
	Working Class	Mean	3.20	3.40	2.60
		Standard Deviation	1.92	0.55	2.41
		Number of Subjects	5	5	5
FEMALES	Middle Class	Mean	2.20	4.00	3.40
		Standard Deviation	1.48	1.00	1.52
		Number of Subjects	5	3	5
	Working Class	Mean	3.00	4.67	3.60
		Standard Deviation	1.41	1.53	0.55
		Number of Subjects	5	3	5
Total for all subjects in each absence group		Mean	3.15	3.93	3.35
		Standard Deviation	1.57	0.92	1.42
		Number of Subjects	20	14	20

effects may be found in Table 7.13. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.3.7.

Table 7.13

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between eight and eleven years on Schedule E of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	*F*	Significance level
Sex (A)	0.04	1	0.04	< 1	n.s.
Social Class (B)	0.47	1	0.47	< 1	n.s.
Type of Father Absence (C)	7.08	2	3.54	1.89	n.s.
Subjects within groups	78.67	42	1.87		

Overall there was no effect due to type of father absence ($F = 1.89$, d.f. = 2,42, $p > .05$) and this factor did not interact with any other factor. Also no other significant results were obtained. That is there was no difference between the mothers in their willingness to answer difficult questions from their children.

(iii) Schedule F: Schedule F examined how willing were mothers to chatter with their children when their children initiated the interaction. A high score on this schedule indicated that mothers were willing to chatter with their children whilst a low score indicated that they were not willing to do so.

The scores obtained by mothers on Schedule F may be found in Appendix 3.3.16. A summary of the scores showing the means and standard deviations obtained by each type of father absence - sex of child - social class sub-group may be found in Table 7.14. A three-way analysis of variance was carried out on the scores. The three factors of the analysis were type of father absence, intermittent, permanent and no absence, sex of child, and social class, middle class and working class. Since the cell frequencies for the father absence - sex of child - social class cells were unequal, analysis of unweighted means was employed. This analysis is appropriate when the inequality in cell frequencies is unrelated to experimental treatments (Keppel, 1973, p.356). A summary of the results of this analysis showing main effects may be found in Table 7.15. There were no significant interactions. A complete table of the results of the analysis may be found in Appendix 4.3.8.

Overall there was no effect due to type of father absence ($F = <1$, d.f. = 2,42, $p > .05$) and this factor did not interact with any other factor.

A significant main effect of social class was obtained ($F = 5.45$, d.f. = 1,42, $p < .025$). Examination of Table 7.14 revealed that middle class mothers obtained higher scores on Schedule F than did working

Table 7.14

Means and standard deviations of scores obtained by mothers of children aged between eight and eleven years on Schedule F of the Index of Communication and Control

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	15.60	15.67	15.60
		Standard Deviation	1.52	0.58	1.34
		Number of Subjects	5	3	5
	Working Class	Mean	12.80	14.40	12.40
		Standard Deviation	3.11	1.67	2.07
		Number of Subjects	5	5	5
FEMALES	Middle Class	Mean	13.00	14.00	15.60
		Standard Deviation	1.58	1.73	2.51
		Number of Subjects	5	3	5
	Working Class	Mean	14.00	14.00	10.80
		Standard Deviation	2.92	4.00	1.64
		Number of Subjects	5	3	5
Total for all subjects in each absence group		Mean	13.85	14.50	13.60
		Standard Deviation	2.48	2.07	2.78
		Number of Subjects	20	14	20

class mothers. That is middle class mothers were more willing to chatter to their children than were working class mothers.

Table 7.15

A summary of the results of the analysis of variance of the scores obtained by mothers of children aged between eight and eleven years on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Sex (A)	3.36	1	3.36	< 1	n.s.
Social Class (B)	29.37	1	29.37	5.45	.025
Type of Father Absence (C)	3.89	2	1.95	< 1	n.s.
Subjects within groups	226.27	42	5.39		

(iv) The Control Questionnaire: The Control Questionnaire examined how mothers dealt with their children when they exhibited different behavioural problems. The scoring method employed by Brandis and Henderson was very complex. It entailed phrase by phrase analysis of verbatim responses and enabled detailed coding of mothers' replies to the questionnaire. Such a detailed analysis was beyond the resources of the present study. It was decided, therefore to employ a simplified coding technique and assess the frequency of use of three strategies by the mothers, avoidance, punishment and support. The

number of times that mothers used each strategy over all six items was counted and the total number of times each strategy was used by each type of father absence - social class - sex of child sub-group was calculated. Means were then calculated for each sub-group and each strategy and the results of this procedure are shown in Table 7.16.

Three Kruskal-Wallis Tests were performed, one for each strategy, in order to compare the use of each strategy by mothers in the three absence groups, permanent, intermittent and no absence. The result of the test for the Avoidance Strategy was not significant ($H = 2.16$, d.f. = 2, $p > .05$). The result for the Support Strategy was also not significant ($H = 2.28$, d.f. = 2, $p > .05$). The result for the Punishment Strategy was significant ($H = 6.20$, d.f. = 2, $p < .05$). In the case of the Punishment Strategy paired comparisons were made between the three absence groups. Ryan's procedure was used to adjust the significance level for each test in order to fix the overall Type I error probability at .05 or less. The significance level required for each test was .02 or greater. In the comparison between the permanent and intermittent absence groups the result was not significant ($U = 2.00$, d.f. = 1, $p > .05$). The comparison between the intermittent and no absence groups was also not significant ($U = 1$, d.f. = 1, $p > .03$). Finally the comparison between the permanent and no absence groups was not significant ($U = 3$, d.f. = 1, $p > .05$). Examination of the mean scores indicated that the intermittent absence group obtained the lowest score, then the permanent absence group and the highest mean score was obtained by the no absence group. Therefore mothers whose husbands were absent intermittently were least likely to

Table 7.16

The mean incidence of use by mothers of children aged between eight and eleven years of avoidance, punishment and support strategies in their responses to the Control Questionnaire

RESPONSE	ABSENCE GROUP	MALES				FEMALES			
		Middle Class		Working Class		Middle Class		Working Class	
		Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects	Mean Incidence	Number of Subjects
	Intermittent	0.60	5	0.40	5	0.00	5	0.60	5
Avoidance	Permanent	0.00	3	0.40	5	1.00	3	0.00	3
	No	0.00	5	0.80	5	0.00	5	0.20	5
	Intermittent	1.60	5	1.60	5	1.60	5	1.80	5
Punishment	Permanent	1.67	3	2.20	5	1.67	3	2.00	3
	No	2.20	5	2.60	5	1.60	5	3.00	5
	Intermittent	3.80	5	4.00	5	4.00	5	3.50	5
Support	Permanent	4.33	3	3.40	5	3.33	3	4.00	3
	No	3.80	5	2.60	5	4.40	5	2.80	5

use the punishment strategy and mothers whose husbands were not absent were most likely to use it. However paired comparisons revealed that differences between the groups were not significant.

A Summary of the Results Obtained from the Index of Communication and Control for Mothers of Children aged Between Eight and Eleven Years

1. Father absence had no effect on mothers' opinions about the functions of toys.

2. Mothers of girls were more likely to consider toys to have a child orientated educational function compared to mothers of boys. Mothers of boys placed greater emphasis on toys as a means of keeping their boys occupied than did mothers of girls.

3. Father absence had no effect on the willingness of mothers to answer difficult questions put by their children.

4. Father absence had no effect on the willingness of mothers to chatter with their children.

5. Middle class mothers were more willing to chatter with their children than were working class mothers.

6. Father absence had no effect on the use by mothers of avoidance and support strategies when their children exhibited behaviour problems.

7. When children exhibited behaviour problems mothers whose husbands were intermittently absent used the punishment strategy less frequently than did mothers whose husbands were permanently absent. Mothers whose husbands were not absent used the punishment strategy most frequently of all. However, paired comparisons revealed that the differences between the groups were not significant.

(b) The Biographical and Environmental Questionnaire

During the course of the interview with the mothers the researcher completed the Biographical and Environmental Questionnaire. Eleven items of the questionnaire were subjected to statistical analysis. These items were:

10. How many schools has the child attended?
11. Is the child happy at school?
13a. Does the mother read with the child?
13b. Does the father read with the child?
14a. Does the mother take the child on outings?
14b. Does the father take the child on outings?
15. Does the father take a big part in managing the child?
18. Has the mother been in paid work since the birth of the child?
19. Do you own your own house?
20. Are there any practical problems experienced by the mother due to father absence?
21. Are there any emotional problems experienced by the mother due to father absence?

Middle class and working class responses were examined separately. The data was not subdivided by sex of child in addition to social class as to have done so would have been to reduce the numbers in each sub-group to an unacceptably low level. In the case of items 10, 11, 13a, 14a, 18, and 19 the permanent absence group was compared with the no absence group and the intermittent absence group was compared to the

no absence group. In the case of items 13b, 14b and 15 the intermittent absence group was compared to the no absence group. In the case of items 20 and 21 the permanent absence group was compared with the intermittent absence group.

Fisher Exact Probability Tests were carried out on the data, copies of which may be found in Appendices 3..3.18 and 3.3.19. Two significant results were obtained. In the working class group mothers whose husbands were permanently absent were more likely to report practical problems associated with that absence than were mothers whose husbands were intermittently absent ($p < .025$). Also in the working class group mothers whose husbands were not absent were more likely to have been in paid employment since the birth of their child than were mothers whose husbands were intermittently absent ($p < .01$). No other significant results were obtained ($p > .025$).

When the responses to items 20 and 21 were examined it was found that in the middle class 66% of divorced women reported practical problems resulting from the divorce and 83% reported emotional problems. In the naval wives 40% reported practical problems and 50% emotional problems as a result of their husband's absence. In the working class 50% of divorced women reported emotional problems and 87.5% practical problems. In the naval wives 10% reported practical problems and 50% emotional problems while their husbands were away. Finally divorced women were asked if the children's fathers maintained regular contact with them. Contact was maintained in the case of four working class boys, one middle class boy and one working class girl.

A Summary of the Results of the Biographical and Environmental Questionnaire for Children aged Between Eight and Eleven Years

1. In the working class group mothers whose husbands were permanently absent were more likely to report practical problems associated with that absence than were mothers whose husbands were not absent.

2. In the working class group mothers whose husbands were not absent were more likely to have been in paid employment since the birth of their child than were mothers whose husbands were intermittently absent.

3. 66% of middle class mothers whose husbands were permanently absent reported practical problems and 83% emotional problems associated with that absence.

4. 40% of middle class mothers whose husbands were intermittently absent reported practical problems and 50% emotional problems associated with that absence.

5. 87.5% of working class mothers whose husbands were permanently absent reported practical problems and 50% reported emotional problems associated with that absence.

6. 10% of working class mothers whose husbands were intermittently absent reported practical problems and 50% reported emotional problems associated with that absence.

Father Absence and the Children in Their Environment

The investigation of the children in their environment had two aims. The first was to discover whether any differences in the environment of the children could be detected, in particular differences in the interaction between mothers and their children that could be related to

absence of the father. The second aim was to examine whether differences in the environment of the children which were associated with absence of the father could be linked with differences in the cognitive development and incidence of emotional and behavioural problems observed in the children.

It has been suggested that any effects observed in children whose fathers are away arise because of problems in the relationship between mothers and children which are brought about as a result of the difficulties mothers experience managing children alone (Hoffman, 1971; Kriesberg, 1967; Lewis & Weinraub, 1976). Data was produced from the present study to indicate that many mothers who are divorced or whose husbands are in the Royal Navy do report both emotional and practical problems associated with absence of the father. No detailed examination of the mothers and their problems was undertaken for two reasons. The first was that the researcher had no clinical training and so was not able to make an accurate assessment of the mothers' psychological state. The second reason, also related to the lack of clinical training of the researcher, was that, in most cases, whilst the mothers were willing to talk at great length about their children, they were far less willing to talk about themselves and their own problems. However, examination of the interview data revealed that the most commonly reported emotional problems were depression, anxiety and loneliness. Reports of practical problems centered around child management and, in the divorced women, economic problems.

The number of divorced women who reported emotional problems was higher than the number of naval wives who reported them, but the

differences within age levels and within social classes was not significant. One difference was observed, however, in the nature of the problems reported in that the divorced women referred to problems that were always with them, whilst with only six exceptions, the naval wives reporting emotional problems said they were only there when their husbands were away. There was no difference between middle class naval wives and divorced women in their report of practical problems. Also, within the group of working class mothers there was no difference in the report of practical problems by divorced women and naval wives with children aged between 5 and 7 years, but there was a difference between the mothers of children aged between 8 and 11 years. Naval wives in this group reported fewer practical problems than divorced women.

In spite of the fact that many mothers reported practical and emotional problems associated with absence of the father few differences were found between the mothers in the way they interacted with their children that could be associated with absence of the father. Several aspects of the interaction were examined. These were mothers' opinions about the functions of toys, their willingness to answer difficult questions put by their children and their willingness to chatter with them. Strategies used by the mothers to control their children in hypothetical situations were examined, together with the frequency with which mothers read to their children and took them on outings.

In the mothers of children aged between 5 and 7 years only two findings were obtained that indicated that father absence had an effect on the way mothers interacted with their children. One of these

was related to mothers' opinions about the uses of toys and the other was the mothers' willingness to chatter with their children.

Within the sub-group of working class mothers of boys, those who were divorced were more likely than naval wives and women whose husbands were never away to emphasise the use of toys as a means of keeping their sons occupied. The naval wives and those whose husbands were never away emphasised educational and child-oriented functions. This finding is further supported by the result that only amongst divorced women did opinions about the use of toys vary with the social class of the mothers and the sex of the child. In this group working class mothers of boys were more likely than working class mothers of girls and middle class mothers of boys to emphasise mother centered rather than child centered functions. This result was not repeated in the responses of mothers of children aged between 8 and 11 years. Here it was sex of child that was the only factor to influence the mothers' responses. Mothers of boys emphasised mother-centered functions such as keeping children occupied by themselves, whilst mothers of girls emphasised child-centered functions such as to enable children to find out things.

Bernstein and Brandis (1970) state that to view toys as a means of keeping children occupied by themselves indicates a concern by mothers to limit interaction with their children. Therefore, it is necessary to consider why divorced mothers of working class boys in the younger group and all mothers of boys in the older group should wish to limit interaction with their sons.

There is some evidence that boys are physically punished more than girls (Maccoby & Jacklin, 1974; Minton et al, 1971; Newson & Newson, 1976). There is also evidence that this is due, in part to the boys' behaviour. Minton et al (1971) found, in a study of children aged 2 years old that boys complied more slowly to directions than did girls and that mothers needed to exert more pressure on boys to ensure compliance. It may be, therefore that mothers find boys more difficult to control than girls and see toys as a means of keeping the boys out of trouble. The fact that the over all sex difference does not appear until the children are at least 8 years of age may indicate that the difficulty that the mothers have in controlling their sons increases as the boys grow older. This may be true for two reasons. The first, pointed out by Maccoby and Jacklin (1974) is that, as the oftener punishment is administered the less effect it has, in boys a spiral is created in that the severity of punishment needed to control the boys' behaviour increases, with the frequency of the punishment. The second reason is that as the boys grow older and stronger, they may become physically more difficult to restrain.

Whilst this explanation may account for the finding in the mothers of older children, it cannot explain why mothers in the working class who have sons aged between 5 and 7 years are particularly concerned with limiting interaction with them compared to other mothers of children of the same age. Some evidence was uncovered from teachers' reports that these boys might be more difficult to manage than the other children of the same age in the sample. All three children of divorced parents who were reported by teachers to exhibit psychiatric

disorder were working class boys. All other sub-groups had one or no children reported by teachers as exhibiting psychiatric disorder. In addition, of the five divorced women in the working class four were judged by the researcher to have moderate to severe difficulties. Two mothers were taking tranquilisers and one of these was visiting a psychiatrist. One other mother reported serious financial problems and the fourth expressed anxiety about her son who had been extremely distressed since her divorce. Only one of the working class naval wives with sons reported that she had great difficulty managing when her husband was away and she reported feelings of depression and loneliness during his absence.

Therefore the mothers may have wanted to limit interaction with their sons, both because the boys were difficult to manage and because they themselves had difficulty in coping with their lives. However, as these things are only related, it is not possible to identify patterns of causation in that relationship. The difficult child may produce the mothers' problems or else the desire to limit interaction with the children might come from a general difficulty in relating to others. This itself might have been a contributing factor in the marital difficulties and divorce. However, the result does provide some support for the theory that absence of the father has an effect on the interaction between mothers and children.

The second result indicating that father absence affected mother child interaction involved naval mothers and their children aged between 5 and 7 years. It was found that in this group mothers of girls were more willing to chatter with their children than were

mothers of boys. This sex difference was not found in the interaction of divorced women or in the interaction of wives whose husbands were never away.

The failure to find this result in mothers who were divorced suggested that a factor other than the physical or psychological absence of the father was influencing the interaction between the mothers and their sons in the naval group. Intermittent absence of the father might interfere with this interaction for a number of reasons. For example, there is some evidence that boys whose fathers are intermittently away have an idealised view of them (Bach, 1946; Lynn & Sawrey, 1959). The father who is only sometimes present may be viewed as more important by the boy than the mother who is always at home. Both of these factors could cause difficulties and distance between mothers and their sons. It is not possible to test this directly as the relationship between fathers and their children was not examined in detail. However, no evidence was produced from the mothers' reports that fathers in the navy were more involved with their children than were fathers who were never away from home. It may be that more detailed study of the fathers and their sons may have uncovered differences, but this needs to be examined further.

Another explanation might be that boys have more emotional and behavioural problems when their fathers are away intermittently and this affects their relationship with their mothers. Against this, there was no evidence that boys whose fathers were in the Royal Navy had more problems than girls. Of the five naval children reported by mothers to exhibit a large enough number of problems to indicate

psychiatric disorder, three were girls and two were boys. Also when the incidence of problems exhibited by boys in the three absence groups was compared, those in the intermittent group had no more problems than the other two groups.

The failure to find differences between mothers whose husbands were in the Royal Navy in the way they interacted with their sons and daughters aged between 8 and 11 years indicated either that the differences in interaction disappeared as the children grew older, or else they were only found in some families from which the father was intermittently away. Further research investigating naval families is necessary in order to establish under what conditions intermittent absence of the father affects interaction between mothers and their sons.

No evidence was obtained to indicate that, in the younger group of children, the strategies used by mothers to control them differed depending on whether the women were divorced, had husbands in the Royal Navy or husbands who were never away from home.

In the mothers of children aged between 8 and 11 years no differences associated with absence of the father could be found in their willingness to chatter with their children, to answer difficult questions put by their children, in their opinions about the functions of toys nor in their use of avoidance or support strategies in dealing with problem behaviour exhibited by their children. However, mothers whose husbands were never away from home did appear to use the punishment strategy more than did naval wives and mothers who were divorced. When paired

comparisons were made between the three absence groups, they were not large enough to be significant. Therefore this result may have been produced by chance factors. Support for this explanation comes from the failure to find this effect in mothers of children aged between 5 and 7 years. Also previous research had indicated that divorced women are more likely than non-divorced women to use imperatives (Hess & Shipman, 1965) and power assertion in controlling their children (Hoffman, 1971; Santrock, 1975).

No evidence was obtained from the results of the Biographical and Environmental Questionnaire that there was any difference between mothers of children at either age level in the frequency with which they read to their children or took them on outings.

Therefore, the prediction that marked differences would be detected in the way in which mothers interacted with their children depending on the presence or absence of the father was not supported by the findings of this investigation. This may have been because such differences did not exist or because the measures used were inadequate to detect them. It has been suggested that absence of the father may affect the relationship between mothers and their children because of the difficulties faced by mothers rearing children single handed (Hoffman, 1971; Kriesberg, 1967). Further, the proposition has been advanced that it is problems that the mother has in relating to her child which produce the effects of father absence on the child (Lewis & Weinraub, 1976). There are others who assert that the pathological nature of the one parent family has been overemphasised and the effects that such a situation has on the mother have been overestimated (Brandwein et al, 1974). Naval wives and divorced women, both in this study and

in others have reported experiencing problems arising from having to cope with a family single handed, whether temporarily or permanently (Carter & Glick, 1970; Freudenthal, 1959; Marsden; 1969, Matthews, 1969; Seebohm, 1973). However it may be that in most cases these problems are coped with sufficiently well to prevent difficulties arising between them and their children. A further point is that only women who actively volunteered to participate in the present study were included in the sample and this may have excluded the women who were managing least well (Herzog & Sudia, 1970).

The second alternative that could account for the failure to find effects of the father on the interaction between mothers and children relates to the method of assessment of that interaction that was employed. Mothers' reports of their behaviour were used. It has been stated that self report techniques are not accurate in assessing actual behaviour (for example, see Hetherington & Martin, 1972). Schaffer (1977) suggests that there is no necessary relationship between what mothers say they do and what they in fact do. It is possible that what they are actually reporting is what they think they ought to do, or what they think the researcher expects. It may be, therefore that the only accurate assessment of mother child interaction is by observation of that interaction. However, here too, the problems are great (Hetherington & Martin, 1972). Observation in laboratory settings may not accurately assess what happens in the home and naturalistic observation has many problems of control. In spite of these problems, the current trend in family research is towards direct observation and a study employing these techniques might

uncover more information about how the network of interactions within a family changes in the absence of the father (Lewis & Weinraub, 1976).

Two results not involving absence of the father were obtained in the investigation of interaction between mothers and children. These were that at both age levels middle class mothers were more willing than working class mothers to chatter with their children and that, at the younger age level mothers of girls were more likely to answer difficult questions than were mothers of boys. The finding that middle class mothers interact verbally with their children more than do working class mothers has often been reported (e.g. Bernstein & Brandis, 1970; Cook, 1973; Hess & Shipman, 1965). In the younger age level mothers may have been more willing to answer questions from daughters than from sons because of a greater willingness to interact verbally with their daughters. However, Maccoby and Jacklin (1974) reviewing the literature on mother-child interaction report conflicting results. Sometimes mothers were found to interact more with their daughters and sometimes they were not. No other aspect of interaction investigated in this study indicated the presence of such an overall sex difference, nor were any sex differences found when the results of mothers of children aged between 8 and 11 years were examined. Therefore the conclusion of Maccoby and Jacklin (1974) that with respect to sex differences in the way mothers interact with their children that (p.312) 'results are highly variable' has been borne out by this study. No conclusions about the existence of stable sex differences in mother-child interaction are possible from this result.

In addition to the interaction between mothers and their children, other aspects of the environment were examined. Father absence had no effect on the number of schools attended by the children, nor on whether they were reported by their mothers to be happy at school. There was no difference between naval fathers and fathers never away from home in their involvement with their children. Mothers reported no differences between the fathers in the frequency with which they read to their children or took them on outings, nor in the extent to which they took a big part in managing them.

However, few fathers in the divorced group maintained regular contact with their children. In the group of children aged between 5 and 7 years three fathers out of 15 maintained contact, whilst in the group of children aged between 8 and 11 years six fathers out of 14 maintained contact and four were working class fathers of boys.

There were only two indications of environmental differences and these were found in the working class families. In the families of children aged between 5 and 7 years those with a father present in the home were more likely than divorced families to own their own home. The finding that the divorced families did not own houses was not surprising given the economic difficulties reported by single parent families (Finer, 1974; Marsden, 1969; Wynn, 1964). Finally, in the families of children aged between 8 and 11 years those women whose husbands were not away from home were more frequently working than those whose husbands were in the Navy. This might be accounted for by one finding. That was that the most frequent type of occupation reported by working class women was shift work in factories. They

worked at times when their husbands were home, either in the evenings or through the night. When the husband is away intermittently this type of work would require that the mothers found someone to look after their children, therefore making such a job more difficult.

The second aim of the study of the children in their environment was to examine whether differences in the environment of the children which accompanied permanent or intermittent absence of the father could be linked with differences in the cognitive development and incidence of emotional and behavioural problems in the children. Given that so few environmental differences were found it could not be expected that such an endeavour would meet with much success. Only in one instance was this possible, in the case of a finding relating to cognitive development.

The results of the study of cognitive development did not demonstrate that permanent or intermittent absence of the father was associated with cognitive deficits. When the WISC scores of the children were compared, no differences that indicated the presence of such deficits were detected in those whose fathers were away intermittently or permanently. However, absence of the father was associated with different patterns of Verbal and Performance IQ scores found in some of the children.

Verbal ability has been shown to be more affected by environmental factors than is non-verbal ability (Bernstein, 1961; Fraser, 1958; Vernon, 1969; Walberg & Marjoribanks, 1973). However, when the possibility that it was absence of the father that was exerting a negative influence on the verbal ability of some children and

a positive influence on the verbal ability of others was considered in Chapter Five, it was rejected. The reason for the rejection differed depending on the result examined.

Two results referred only to children whose fathers were away intermittently. These were that in the younger age level middle class and working class boys whose fathers were in the Royal Navy and therefore intermittently absent, obtained Performance IQ scores higher than Verbal IQ scores. In the older sample middle class male and female naval children obtained Verbal IQ scores higher than Performance IQ scores. The explanation that it was deprivation of the father or of some function normally fulfilled by him was rejected here because those children for whom the absence was more extreme, that is those whose parents were divorced, did not exhibit this pattern.

Other environmental variables that have been shown to be related to the verbal ability of children also could not be used to account for this result. These environmental variables are social class (Bernstein, 1961; Vernon, 1969); poor housing conditions (Davie et al, 1972; Douglas, 1964) and family size (Douglas et al, 1968; Rutter, Tizard & Whitmore, 1970). All three were controlled in this study. Performance IQ higher than Verbal IQ has been found to be related to emotional disturbance in children (Williams, 1961), but it has already been stated that no evidence was found in Chapter Six to indicate that these boys had more emotional and behavioural problems than other children.

There is one variable that has been associated with verbal ability in children that might be important here and that is the interaction between mothers and their children (Bernstein, 1961; Robinson, 1972).

It was found that in the families of children aged between 5 and 7 years from which the fathers were intermittently away, mothers were less likely to chatter with their sons than with their daughters. Only in this group of mothers was this sex difference found. When the result was examined earlier it was suggested that intermittent absence of the father might bring about problems in the relationship between mothers and their sons, reducing the amount of verbal interaction between them. However the results obtained from the older children and their mothers indicate that neither lower levels of verbal interaction between women and their sons, nor Performance IQ lower than Verbal IQ are an inevitable outcome of intermittent absence of the father. In the study of children aged between 8 and 11 years no evidence was produced that intermittent absence of the father had any effect on the way in which mothers interacted with their sons. Also when the pattern of IQ scores obtained by the children in this group were examined they were found to vary with their social class. In the working class group both boys and girls obtained Performance IQ scores higher than Verbal, but in the middle class children, both boys and girls obtained Verbal IQ scores higher than Performance. Further examination of the relationships in naval families would be necessary to determine under what circumstances intermittent absence of the father results in mothers' unwillingness to interact with their sons and whether when this occurs it is associated with depressed verbal ability in the boys.

In the sample of children aged between 8 and 11 years it has been reported that the pattern of IQ scores obtained varied with the type of father absence and the social class of the children. In the middle

class children, only in those whose fathers were away intermittently were marked differences between Performance and Verbal IQ scores observed. Both male and female middle class children whose fathers were absent intermittently obtained Verbal IQ scores higher than Performance IQ. Given that verbal ability is more affected by environmental influences than non-verbal (Bernstein, 1961; Fraser, 1958; Vernon, 1969; Walberg & Marjoribanks, 1973), this suggested that some aspects of the environment of these children were exerting a positive influence on their verbal ability. No evidence was obtained from the study of middle class mothers that those whose husbands were in the Royal Navy interacted any differently with their children from any of the other middle class mothers. However, it is possible that other characteristics of the environment were exerting a positive influence on the children.

Jordan, Radin and Epstein (1975) reported that the IQ of middle class boys was positively related to paternal nurturance. For girls there was evidence that lack of independence from the father and pressure from him was negatively related to intelligence. It may be that intermittent absence of the father produces the optimum father-child relationship for cognitive development. It may encourage independence in girls as the father is not always at home and foster a nurturant relationship between fathers and sons, who may be closer when the father is at home. However, such an explanation can only be speculative.

This pattern of scores is one most frequently found in middle class children. Family variables other than interaction between

mothers and their children have been put forward to account for this. For example emphasis on school performance and encouragement of achievement (Fraser, 1958; Hanson, 1975; Honzik, 1967) also the provision of models of intellectual interests and activities (Hanson, 1975) have been shown to be positively related to the verbal ability of children. It may be that these features are more common in middle class naval families than in other middle class families. However, in the children aged between 5 and 7 years studied here Verbal IQ scores higher than Performance was found to be a characteristic of middle class children in general rather than a characteristic particularly noted in middle class naval children. Also, it has already been stated that in one group of five middle class boys whose fathers were in the Royal Navy Performance IQ higher than Verbal IQ scores were observed. It is possible that the effects of the positive features of the middle class naval family do not appear until after the children are aged 8 years old. Or it may be that such a pattern of scores is simply one that is found in some middle class children and the fact that, in this case, the children have fathers in the Royal Navy is incidental. Further study of the patterns of abilities found in middle class naval children would be necessary before a decision could be made between the two alternatives.

In the older age level, working class children whose fathers were away permanently and intermittently obtained Verbal IQ scores lower than Performance IQ scores. The explanation that this was due to deprivation of something normally provided by the father was rejected for two related reasons. First, studies that have indicated a positive

relationship between father-child interaction and the cognitive development of children have indicated that the relationship is strongest in the middle class family (Jordan, Radin & Epstein, 1975; Radin, 1973). Also studies of child rearing indicate that the middle class father is more involved with his children than is the working class father (Benson, 1968; Kohn & Carroll, 1960; Lynn, 1974; Newson & Newson, 1968). Therefore, if the depressed verbal score resulted from deprivation of something usually provided by the father, middle class children should also be affected. However, this was not found to be the case.

In common with the younger group, it was found that all working class mothers chattered less with their children than did middle class mothers, so the results could not be attributed to lower levels of verbal interaction only found in the absence groups. The possibility that the pattern of scores was associated with a higher incidence of emotional and behavioural problems was rejected for two reasons. One because there was no evidence at this age level linking intermittent absence of the father with a higher incidence of problems. Two because a higher incidence of emotional and behavioural problems was found in both middle class and working class children of divorced parents, whilst the depressed verbal ability relative to non-verbal was only found in the working class children.

Radin (1976) has suggested that absence of the father may only affect children of intermediate socioeconomic status. She considers that in the lowest socioeconomic status, that is where fathers are in unskilled jobs or are unemployed, the environment is so difficult that

absence of the father makes no difference, whilst in the middle class home there are enough resources to make up for absence of the father. Only in the intermediate group would the extra stress that absence of the father puts on a family be important. The working class children in the present investigation came from families in which the fathers had occupations ranging from the status of foreman down to unskilled manual worker and it may be that the presence of the higher status occupations renders them intermediate in the sense used by Radin (1976). It may be that given a level of Performance IQ, absence of the father results in environmental conditions, other than those investigated here, that prevent the children developing verbal ability as high as non-verbal. However, it must be remembered that the results do not indicate a deficit in verbal ability compared to the verbal ability of working class children whose fathers were not away, only a pattern of scores within the permanent and intermittent absence groups.

A more parsimonious explanation might also be put forward. Performance IQ higher than Verbal IQ is a pattern most often found in working class children (Bernstein, 1961). In both studies of children aged between 5 and 7 years described above this pattern was found in the working class sample as a whole. It has been suggested that where absence of the father has a negative effect on cognitive ability this effect does not become apparent until after the children reached the age of 8 years (Radin, 1976). However, it would not be possible to use this to account for the differences in the results found in the two age levels. As in the younger children this pattern was found in all those in the working class regardless of whether their fathers

were absent or present, the failure to find the same pattern in children aged between 8 and 11 years whose fathers were present suggests a change in them rather than a change in the children whose fathers were absent. In order to explain the result it would be necessary to argue that positive effects of the father's presence did not appear until the children were aged 8 years and over. However, where positive relationships between attributes of the father and cognitive development of the children have been reported they have been found in children aged 4 years (Jordan, Radin & Epstein, 1975; Radin, 1973). Support for the social class argument comes from the failure of earlier research to associate absence of the father with low levels of verbal ability compared to non-verbal ability (Altus, 1958; Barclay & Cusumano, 1967; Landy, Rosenberg & Sutton-Smith, 1969; Nelson & Maccoby, 1966).

In Chapter One, when the research investigating the effects of father absence on the cognitive development of children was reviewed, it was suggested that the discrepancies in the findings reported were due firstly to the failure to control for variables other than absence of the father that could have influenced the results, and secondly to the fact that many studies examined only children from narrow populations such as those referred to child guidance clinics. In the investigation of cognitive development reported here children were drawn randomly from the population of a city. They were matched for age, sex, social class and number of siblings. The reason for the absence was clearly defined and the age of onset of the father absence was controlled. In addition, no differences in the environment, of the children consistently associated with absence of the father could be detected.

The results of the investigation of children aged between 5 and 7 years and children aged between 8 and 11 years failed to find evidence for the existence of an association between absence of the father and cognitive deficits in children. Some differences were found in the pattern of IQ scores obtained by the children, but in no case were these consistent across samples of children, nor could it be demonstrated that absence of the father or environmental variables associated with such absence were important in determining these patterns.

The results of the investigation of emotional and behavioural problems were described in Chapter Six. The main finding relating to the effects of permanent absence of the father resulting from parental divorce was that such absence was associated with an increased incidence of emotional and behavioural problems in children. Evidence for this came from parents' and teachers' reports of children aged between 5 and 7 years and children aged between 8 and 11 years. The greatest consistency between teachers' and parents' reports was found in the study of children aged between 8 and 11 years. Mothers of boys and girls from both social classes reported a higher incidence of problems in their children compared to mothers of children whose fathers were never away or were away intermittently. In this age group teachers also reported a higher incidence of problems in middle class boys and working class girls whose fathers were away permanently. Further evidence that it was middle class boys and working class girls who were particularly affected came from the first study of children aged between 5 and 7 years. In this study only working class girls whose

fathers were permanently away were reported by their mothers to exhibit a greater number of problems than working class girls whose fathers were never away. Teachers' reports indicated that permanent absence resulted in a higher incidence of problems only in the case of middle class boys.

Examination of the incidence of psychiatric disorder in all children studied, revealed trends to support these findings. One other point that became apparent from that examination related to working class boys. The mothers of boys in divorced families reported them to have a high incidence of psychiatric disorder, whereas teachers' reports indicated that the incidence of disorder was high in all working class boys and there was only a marginally higher incidence in those from divorced families. Finally indications from both mothers' and teachers' reports were that middle class girls were least affected by permanent absence of the father.

The association between intermittent absence and a higher incidence of problems was less clear. Teachers reported that neither the incidence of emotional and behavioural problems nor the incidence of psychiatric disorder was any higher in children whose fathers were intermittently away than in children whose fathers were never away from home. The examination of mothers' reports of children aged between 8 and 11 years also revealed no differences between these two groups of children. However indications were obtained from mothers' reports of children aged between 5 and 7 years that some of those children whose fathers were intermittently away exhibited a higher incidence of problems than children whose fathers were never away. In the first

sample of children aged between 5 and 7 years mothers' reports showed that working class girls experiencing intermittent absence of the father had significantly more problems than working class girls whose fathers were not away. No significant difference was found in the incidence of psychiatric disorder between naval children and children whose fathers had not been away. However, in both samples of children aged between 5 and 7 years there was a trend indicating that the incidence of such disorder was higher both than that found in the general population and than that found in the children studied here whose fathers were never away from home.

When the results were examined in Chapter Six it was stated that they could not be attributed to deprivation of the father or fathering. All children had experienced at least one year's absence of the father before they reached the age of 5 years. If physical absence of the father had been important it would be expected that intermittent absence would be associated with as high an incidence of problems as permanent absence. If duration of absence was important then it would be expected that children experiencing intermittent absence would exhibit a higher number of problems as they grew older. Finally, if it was only when the father was no longer part of the family that his absence was important then it would be expected that intermittent absence should have no effect. None of these expectations was found to be upheld.

It was further stated in Chapter Six that explanations for the findings might be discovered if the current environment of the children was examined. In particular it was expected that a link would be found between mother-child interaction and the incidence of problems in the

children. However, the attempt to link differences in the environment of the children associated with absence of the father and differences in the children themselves associated with that absence met with little success.

The expectation that absence of the father would affect the interaction between the mother and her child was derived from the fact that women whose husbands are away intermittently or who are divorced report both emotional and practical problems associated with those circumstances (Carter & Glick, 1970; Freudenthal, 1959; Marsden, 1969; Seebohm, 1973). In some research, effects associated with absence of the father that have been found in children have been attributed to difficulties in the relationship between mothers and children (Hoffman, 1971; Kriesberg, 1967). These difficulties come about, it is suggested, as a result of the problems faced by the single mother.

No evidence was obtained from the study of the way mothers interacted with their children to show that this interaction was linked with the higher incidence of emotional and behavioural problems found in children experiencing absence of the father. No results were produced that could account for the higher incidence of problems observed in children whose fathers were permanently away nor for the more pronounced effect found in middle class boys and working class girls. This was so in spite of the fact that a number of the divorced women did report that they experienced emotional and practical problems related to single handed child-rearing and living alone.

The results of the study demonstrated that there was a more consistent relationship between permanent absence of the father and an

increased incidence of emotional and behavioural problems in children aged between 8 and 11 years than was found in children aged between 5 and 7 years. No differences were found in the interaction between mothers and their children in the older age level that were associated with permanent absence of the father. Divorced women with children aged between 5 and 7 years as well as those with children aged between 8 and 11 years reported emotional and practical problems.

When the failure to find marked differences between the mothers in the way in which they interacted with their children was discussed earlier in the chapter, one reason put forward to account for the failure was that the measures used were not appropriate. There the criticism made was that mothers were asked to say what they did. No attempt was made to observe what they actually did. A further point, relevant here is that the measures used were orientated to assess the quantity of interaction between mothers and children rather than the quality. It is possible that, whilst the amount of interaction has been shown to be related to the verbal ability of children, (Bernstein & Brandis, 1970; Bradley & Caldwell, 1976) more detailed examination of the nature of the mother-child relationship would be necessary before links between that and emotional and behavioural problems in the children could be found. A closer study of the mother-child relationship in families in which the parents are divorced, including direct observation of the way the mothers and children behaved towards each other, would perhaps uncover differences related to emotional and behavioural problems in the children.

Whilst no direct relationship could be found between mother-child interaction and an increase in the number of problems exhibited by the children one result linked the report of problems by the mothers with a difference in this interaction. Working class divorced women with boys aged between 5 and 7 years emphasised functions of toys concerned with limiting interaction with their children to a greater extent than did other working class mothers of boys. When the interviews with these divorced women were examined four out of five were found to express problems judged by the researcher to be moderate to severe. No other working class group expressed such a high incidence of problems. However, with only five mothers in this particular sub-group and no evidence from any other mothers studies, it would be inappropriate on these grounds alone to make generalisations about the relationship between problems experienced by mothers and their interaction with their children.

It was stated that the only results obtained from the examination of children whose fathers were intermittently away indicating that such absence influenced the incidence of emotional and behavioural problems came from mothers' reports of children aged between 5 and 7 years. When mothers in this group were asked whether they experienced practical problems relating to their husband's absence mothers of the younger children were more likely to report them than were mothers of older children and this was most marked in the working class group. Here the percentage of mothers of children aged between 5 and 7 years reporting problems was 80%, whilst of the mothers of children aged between 8 and 11 years 10% reported practical problems. The same

trend was visible in the middle class mothers, but it was not so marked. 80% of mothers of children aged between 5 and 7 years and 40% of mothers of children aged between 8 and 11 years reported problems. It is possible that these results indicate that mothers manage intermittent absence of their husbands better as their children grow older and that this has an influence on the incidence of problems in their children. Other research has shown a relationship between the difficulties wives of servicement have and emotional and behavioural problems in their children (Gabower, 1960; Pederson, 1966).

If the environmental variables examined in the present study cannot be used to explain the effect on children of permanent absence of the father then other explanations for the findings must be sought. The first finding to be accounted for is the fact that the increased incidence of emotional and behavioural problems associated with permanent absence of the father was most consistently found in children aged between 8 and 11 years. There is evidence that, in the general population, problems are more common in children aged 8 years and over than they are in younger children (Anthony, 1970). Therefore the finding may simply reflect this age pattern rather than arise because of factors associated with absence of the father.

There is much evidence to indicate that an association exists between the family environment and the incidence of behavioural and emotional problems in children. However what the specific factors are is difficult to determine. As Rutter and Madge (1976) state 'A veritable legion of family factors have been associated with one or other type of psychiatric disorder.' However, when single variables have been

examined they have been found to be poor predictors of outcomes (Clarke & Clarke, 1976).

An alternative to the static model which proposes single factors or consistent patterns of factors that produce a negative outcome is one that emphasises the continual interaction between the child and his ever changing environment (Anthony, 1970; Clarke & Clarke, 1976). Individual tolerance of environmental stress is determined by genetic and constitutional factors (Anthony, 1970; Rutter & Madge, 1976). The amount of stress the child experiences depends on many different aspects of his environment and his interaction with it. It is suggested that problems in the child occur when the cumulative stress reaches a point that is critical for that child and remain only as long as that critical point is exceeded. In this model, absence of the father would only have meaning in the context of the total environment of the children. In some families it may be that such absence and the difficulties preceding and accompanying it are sufficient to raise the cumulative stress above the critical point whilst in others they are not. Such an explanation is similar to that put forward by Radin (1976) to account for the finding that father absence is associated with cognitive deficits in some children and not in others. This has been mentioned earlier in the chapter. Briefly, she suggests that such deficits will not occur in middle class homes in which the families are more likely to have the emotional and physical resources to cope with the extra strain that absence of the father imposes. In children from severely deprived environments an extra negative feature would have no effect. It is only in intermediate environments that father absence might be critical.

Evidence that such a model is appropriate for adults exists, in that it has been shown that an association exists between acute life stresses and emotional disorder (Brown et al, 1975; Heisel, et al, 1973). It has also been shown that individuals vary in their ability to withstand such life stresses (Brown et al, 1975). One additional piece of evidence that indicates the appropriateness of examining cumulative stress rather than individual events when attempting to account for the presence of problems in children comes from a study reported by Rutter and Quinton (1977). They constructed a family adversity index comprising six elements. These were father in unskilled or semi-skilled job; large or overcrowded family; current marital discord or a broken home; mother with depression or neurosis; the child having been in care for a week or more and finally the father having committed any proven offence against the law. A score of two or more adverse factors was found to be significantly associated with psychiatric disorder in children.

The finding that intermittent absence of the father had a far lesser effect on the incidence of emotional and behavioural problems than did permanent absence resulting from divorce might be explained by examining the likelihood of the existence of family adversity, such as that outlined by Rutter and Quinton (1977). All families in which the parents were divorced would obtain a score of at least one on the index. Some of the families had fathers who, when present had unskilled or semi-skilled jobs, which would bring their adversity score to the critical level. The finding that divorce is frequently associated with emotional problems in mothers (Marsden, 1969) may

account for a critical score in some children. None of the other three conditions applied to the children in this study. Examining the situation of children whose fathers were intermittently away, none of the six items of the index necessarily applied to them. However, there is some evidence that both the incidence of marital discord and emotional problems in the mother are higher in naval than in non-naval families (Grubb et al, 1970; Matthews, 1969). Therefore the number of children experiencing a critical level of adversity would be expected to be higher in the naval group than in the general population but not as high as in children of divorced parents.

The explanation that it is cumulative stress, coming from a number of different sources that vary from child to child, may be used to account for the more specific findings reported here. There is some indication that boys may be more affected by family stress than are girls. Rutter (1970) reported an association between psychiatric disorder in boys and marital conflict, psychiatric disorder in a parent and low parental warmth, but this relationship was not found in the girls studied. This could account for the finding that middle class boys were affected by permanent absence of the father, but middle class girls were much less affected. It might be that the boys' response to the family difficulties preceding and accompanying the permanent absence of the father resulted in enough stress to exceed what for them was critical level, whilst in the girls their lesser vulnerability to such family circumstances meant that the stress they experienced did not reach that level.

The sex differences found in the responses of the working class children to absence of the father were not marked. Mothers reported a higher incidence of problems in both boys and girls, and whilst teachers did not report that working class boys were particularly affected by permanent father absence, their report of problems in all working class boys appeared to be high, a finding confirmed by other research (Davie et al, 1972; Douglas, 1964).

Social class differences in the incidence of emotional and behavioural problems have been detected indicating that working class children exhibit more emotional and behavioural problems than do middle class children (Davie et al, 1972), although other studies have not reported such differences (Rutter, Tizard & Whitmore, 1970). Rutter and Madge (1976) suggest that it is not social class itself that is important, rather it is the fact that low socioeconomic status is associated with other environmental difficulties. It may be that for working class girls, the additional stress imposed on them by absence of the father, together with the stress already associated with other environmental conditions more frequently found in working class families may result in a higher incidence of behavioural problems. For working class boys it is possible that their greater responsivity to family stress (Rutter, 1970) together with the additional environmental risk factors associated with working class life (Rutter & Madge, 1976) may have been enough to produce disorder in some of them without the additional stress they experience as a result of absence of the father.

Further examination of social class and sex differences in the way children respond to permanent absence of the father resulting from divorce would be necessary in order to test the validity of these explanations.

The results of this investigation suggest that neither absence of the father, nor a consistent pattern of environmental conditions associated with that absence can account for the increased incidence of emotional and behavioural problems found in children whose fathers are permanently or intermittently away. The explanation has been advanced that only when the additional stress produced by that absence is enough to increase the level above that which is critical for the individual does an effect appear. What is the critical level for each child may vary according to genetic and other constitutional factors. Whether that critical level is reached may depend, not on the presence or absence of a parent or on any other single variable, but on the interaction between the child and all the features that make up his or her current environment.

CHAPTER EIGHT

FATHER ABSENCE: SOME CONCLUSIONS

A review of the research that has investigated the effects of absence of the father on the cognitive development and the personal adjustment of children revealed the existence of conflicting findings. Some studies reported that absence of the father had an effect on children while others reported that it did not. A close examination of these studies revealed many methodological inadequacies. In particular these were the failure to take into account characteristics of the children and factors in their environment other than absence of the father; the failure to examine differences in the effects of absence which occurs for different reasons and finally the selection of children from narrow populations such as convicted delinquents or children attending child guidance clinics.

The aim of the investigations described in the preceding pages was to discover whether, when these methodological inadequacies were eliminated, differences associated with absence of the father would still be detected in the children. Further, the current environment of the children was examined to explore whether differences that were associated with absence of the father could be linked with differences in that current environment.

The samples studied were selected randomly from the population of a city. Both middle class and working class male and female children

were included in the samples. Two age levels were considered. There were two samples of children aged between 5 and 7 years and one aged between 8 and 11 years. All subjects came from families in which there were two or three children. Children experiencing absence of the father for two distinct reasons were studied. Firstly there were those whose parents were divorced and who were living with their mothers. For them absence of the father from the home was permanent. Secondly, there were children whose fathers were members of the Royal Navy and who were intermittently absent because of the demands of their occupation. Absence of the father was defined as lasting for at least one year before the children had reached the age of 5 years. In both groups the absence also continued after that age. Children experiencing permanent and intermittent father absence were compared with those whose fathers were never away from home.

No evidence was obtained from the study of cognitive development that father absence was associated with cognitive deficits. No differences were found between children experiencing permanent, intermittent or no father absence in the scores they obtained on the WISC. This was so in the first investigation of children aged between 5 and 7 years and in the second investigation in which were examined a further sample of children aged between 5 and 7 years and an additional sample aged between 8 and 11 years. Other studies have produced findings similar to those reported here indicating that father absence has no effect on the cognitive development of children (Newstat, 1973; Risen, 1939; Rutter, Tizard & Whitmore, 1970; Solomon et al, 1972; Wasserman, 1972).

Behind the attempt to associate absence of the father with cognitive deficits lies the assumption that there is some consistency between families in the role that the present father plays in the cognitive development of his child. However, the role of the father in the family is not, as yet, well understood (Lamb, 1976). What is clear is that there are large individual differences between fathers in their involvement with their children (Biller, 1974; Lamb, 1976). The involvement may range from minimal contact to contact equivalent to or greater than that of the mother. Therefore, without establishing the part that the father played when present it would be impossible to determine the changes for the child that occurred as a result of his absence. In addition, the evidence from studies of maternal absence (Rutter, 1972; Schaffer,1977) indicates that mothering does not have to be carried out by the mother. It may be equally true that, when the father is absent, fathering may be carried out by others.

Increasingly the attempt to establish causal relationships between single environmental variables and developmental outcomes is being questioned. Clarke and Clarke (1976) and Schaffer (1977) point to the great variation in environments that allow the normal development of children. In their conceptualisation, absence of the parent would only result in cognitive deficits if that absence was accompanied by marked additional deprivation in the environment. In support of such a conceptualisation Rutter and Madge (1976) in a review of the research conclude that where absence of the father is associated with cognitive deficits those deficits are due not to the absence itself, but to family adversity. Family adversity may, but need not necessarily,

accompany absence of the father and may equally arise from many other causes.

In conclusion, it is argued that the findings of this study, taken together with the points outlined above, make a strong case against the existence of a direct association between father absence and cognitive development. Further it is argued that the attempt to isolate links between any single variable and cognitive development is to oversimplify the complexity of the inter-relationship between the developing child and his continually changing environment.

The results of the investigation of emotional and behavioural problems demonstrated that absence of the father was associated with an increased incidence of such problems. Reasons for the absence, the sex of the children and their social class were all found to be influencing factors. Both mothers' and teachers' reports showed that permanent absence of the father was associated with an increased incidence of emotional and behavioural problems in children aged between 5 and 7 years and in children aged between 8 and 11 years. Other research has also indicated that permanent absence of the father when linked with parental divorce is associated with problems in children (Caplan & Douglas, 1969; Douglas, 1970; Gibson, 1969; Koch, 1961). In addition, evidence was obtained that showed the effect of permanent absence to be most marked in middle class boys and working class girls.

Intermittent absence of the father was found to be related to a higher incidence of problems only in mothers' reports of children aged between 5 and 7 years, and the effect was less clear than that observed in the permanent absence group. In the first sample of

children studied it was found that working class girls whose fathers were absent intermittently exhibited a greater number of problems than did working class girls whose fathers were never away from home. In addition, when the incidence of psychiatric disorder was examined it was found that, in both samples of children aged between 5 and 7 years, there was a non-significant trend indicating that the incidence of disorder was higher in children whose fathers were away intermittently than in those whose fathers were never away.

The possibility that the increased incidence of problems in the children was brought about as a result of the absence itself was rejected. No evidence was obtained from the study to indicate a link between a consistent pattern of environmental circumstances accompanying absence of the father and the increased incidence of emotional and behavioural problems. In particular there was no relationship between the way in which mothers interacted with their children and the incidence of problems exhibited by the children.

It was suggested in the conclusions drawn from the investigation of cognitive development that the attempt to find causal links between single variables and developmental outcomes oversimplifies the complex relationship between the child and his environment (Clarke & Clarke, 1976). Similarly it is concluded that the search for links between single environmental variables and outcomes is also inappropriate in the attempt to account for the existence of emotional and behavioural problems in children. No findings were obtained from this study to indicate that such links existed.

It has been stated that to view father absence versus father presence as a dichotomous variable, is to fail to consider the complexity of the environment within which such absence or presence occurs (Lamb, 1976; Radin, 1976). An explanation of the findings of the present investigation was sought that would take account of that complexity. A model was proposed based on the formulations of Anthony (1970) and Rutter and Quinton (1977). This model took account of both individual differences in the children in their responsivity and also environmental factors. It was suggested that a relationship between the two existed in that individual differences including genetic and other constitutional factors determined what, for each child was a tolerable or intolerable amount of environmental stress. When the critical level of stress was exceeded the child would develop emotional and/or behavioural problems. Whether, for any individual child, that critical level of stress was reached depended on the level of environmental adversity that was experienced.

Absence of the father might, but would not necessarily produce a level of stress in the child that for him was intolerable. Whether or not this happened would depend on many factors. These include the level of environmental stress that the individual child is able to tolerate; the amount of adversity present before the absence of the father began; the relationship between the father and the child and the significance of the separation to the child; and finally the way the mother responded to the absence and the way that this affects her relationship with her child. In some cases absence of the father may reduce the level of adversity, for example where parental divorce

has been preceded by severe marital conflict of where the father is criminal or alcoholic. This list is by no means exhaustive, but does illustrate the difficulty of attempting to examine the effects of what appears, superficially, to be a well defined event, but which, on closer examination, is revealed to encompass a variety of different circumstances.

The attempt to account for the results of this study by establishing links between single environmental variables and the increased incidence of problems exhibited by children whose fathers were absent met with no success.

It is concluded that an alternative type of explanation is better able to account for the findings. In this explanation absence of the father and the circumstances accompanying such absence are considered as specific events among many that might, but do not necessarily, increase the environmental stress experienced by the children. Only when the cumulative stress reaches a level which, for a particular child, is critical will emotional and behavioural problems appear.

Empirical testing of this explanation is necessary to determine whether it might remove some of the apparent inconsistencies in the results of father absence research.

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APPENDIX 1

CORRESPONDENCE EMPLOYED IN OBTAINING SUBJECTS

Plymouth Polytechnic
Director: R. F. M. ROBBINS, B.Sc., Ph.D., F.R.I.C.

DRAKE CIRCUS
PLYMOUTH PL4 8AA
ENGLAND
Tel: 0752 21312 Ext.

Date as Postmark

Dear

I am writing to ask for your help in a research project being undertaken at Plymouth Polytechnic, designed to study young children in different family situations.

If you yourself have a young family and would be prepared to help with the research, I would be grateful if you would fill in the enclosed questionnaire and return it to me in the prepaid envelope. Any information obtained would, of course, be kept completely confidential

Yours sincerely,

Monica Hayes (Miss)

Enc.

QUESTIONNAIRE

Number of Children .....

Names and Ages of Children .....

.....

.....

School(s) attended by children .....

.....

.....

.....

.....

Father's Occupation .....

.....

Mother's Occupation .....

.....

Is Mother a) Married b) Widowed c) Divorced d) Separated

Please underline the one that applies.

THANK YOU VERY MUCH FOR YOUR HELP

Please return to:-

Miss M. Hayes,
Department of Management, Business Studies
and Social Science,
Plymouth Polytechnic,
Plymouth,
PL4 8AA.

Plymouth Polytechnic
Director: R. F. M. ROBBINS, B.Sc., Ph.D., F.R.I.C.

DRAKE CIRCUS
PLYMOUTH PL4 8AA
ENGLAND
Tel: 0752 21312 Ext.

Date as postmark

A short while ago I wrote to you asking if you would be prepared to take part in a research project being carried out at Plymouth Polytechnic designed to investigate the development of young children from differing family backgrounds.

You very kindly completed the questionnaire sent and indicated that you have a family of young children one of whom is called

Would it be possible for me to call on you at some time during the week beginning to talk about your child?

I enclose a timetable and would be grateful if you would mark on it the times during that week when it would NOT be convenient for me to call and return it to me in the envelope provided. I will then write to arrange a definite appointment.

Thank you very much for your help.

Yours sincerely

Monica Hayes

T I M E T A B L E

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9.00-11.00 am					
11.00-1.00 pm					
2.00-4.00 pm					
4.00-6.00 pm					

Please mark with a X the times when it would <u>not</u> be convenient for me to call

Plymouth Polytechnic
Director: R. F. M. ROBBINS, B.Sc., Ph.D., F.R.I.C.

DRAKE CIRCUS
PLYMOUTH PL4 8AA
ENGLAND
Tel: 0752 21312 Ext.

Dear

Thank you very much for completing and returning the timetable.

I would like to call on you on at . If this is not convenient I would be grateful if you would contact me so that another appointment might be arranged.

Yours sincerely,

Monica Hayes

Plymouth Polytechnic
Director: R. F. M. ROBBINS, B.Sc., Ph.D., F.R.I.C.

DRAKE CIRCUS
PLYMOUTH PL4 8AA
ENGLAND
Tel: 0752 21312 Ext.

Dear

I would like to call on you on at .
If this is not convenient I would be grateful if you would contact me so that another appointment might be arranged.

Thank you for your help.

Yours sincerely,

Monica Hayes

Plymouth Polytechnic
Director: R. F. M. ROBBINS, B.Sc., Ph.D., F.R.I.C.

DRAKE CIRCUS
PLYMOUTH PL4 8AA
ENGLAND
Tel: 0752 21312 Ext.

Date as Postmark

I am writing to ask for your help in a research project being undertaken at Plymouth Polytechnic. We are investigating the development of 120 primary school children, living in the Plymouth area, from differing family backgrounds. As we expect that a small number of the children we intend to study will be pupils at your school, we need to ask for your help in two important ways.

Firstly, an essential part of our study of the children involves obtaining information from his or her class teacher. This will be invaluable as a complement to details obtained from the parents and from the children themselves. Therefore we need your permission to ask the class teacher to complete a short questionnaire. All the data obtained will be kept completely confidential and no information given by the teacher will be passed on to the parents.

The second way in which we need your help is in allowing each child to be given one simple psychological test, administered by myself, on school premises. All that would be needed for this testing would be a table and a quiet corner.

No approach will be made to you about individual children until written permission has been obtained, by me, from the parents. The project has been approved by Mr Williams.

If you wish to know anything more about the research do not hesitate to contact me. I would be happy to visit your school to answer any questions.

Thank you very much for your help.

Yours sincerely,

Monica Hayes
Department of Management, Business Studies
and Social Science

STRICTLY CONFIDENTIAL

FOR OFFICE USE ONLY

SCALE A (2)

TO BE COMPLETED BY PARENTS

Name of Child _____ Boy/Girl Date of Birth _____

Address _____ School _____

_____ _____

_____ _____

HOW TO FILL IN THIS FORM

The questionnaire asks about various kinds of behaviour that many children show at some time. Please give the answers according to the way your child has been during the PAST 12 MONTHS.

HEALTH PROBLEMS

Below is a list of minor health problems which most children have at some time. Please tell us how often each of these happens with your child by putting a cross in the correct box.

	Never	Occasionally, but not as often as once per week	At least once per week	FOR OFFICE USE ONLY
A. Complains of headaches	☐	☐	☐	☐
B. Has stomach-ache or vomiting	☐	☐	☐	☐
C. Asthma or attacks of wheezing	☐	☐	☐	☐
D. Wets the bed or pants	☐	☐	☐	☐
E. Soils or loses control of bowels	☐	☐	☐	☐
F. Has temper tantrums (that is, complete loss of temper with shouting, angry movements, etc.)	☐	☐	☐	☐
G. Had tears on arrival at school or refused to go into the building ..	☐	☐	☐	☐
H. Truants from school	☐	☐	☐	☐

HABITS. Please place a cross in the box by the correct answer.

FOR OFFICE USE ONLY

I. Does he/she stammer or stutter? .. .. .. ☐ No. ☐ Yes—mildly. ☐ Yes—severely. ☐

II. Is there any difficulty with speech other than stammering or stuttering? .. .. .. ☐ No. ☐ Yes—mild. ☐ Yes—severe. ☐

If "Yes", please describe the difficulty: _____

III. Does he/she ever steal things? .. .. .. ☐ No. ☐ Yes—occasionally. ☐ Yes—frequently. ☐

If "Yes" (occasionally *or* frequently), does it involve

- ☐ minor pilfering of pens, sweets, toys, small sums of money, etc.
- ☐ stealing of big things ☐
- ☐ both minor pilfering *and* stealing of big things

is stealing done

- ☐ in the home
- ☐ elsewhere
- ☐ both in the home *and* elsewhere

is stealing done

- ☐ on own
- ☐ with other children or adults ☐ ☐
- ☐ sometimes on own, sometimes with others

IV. Is there any eating difficulty? .. .. .. ☐ No. ☐ Yes—mild. ☐ Yes—severe. ☐

If "Yes", is it

- ☐ faddiness
- ☐ not eating enough ☐
- ☐ eating too much
- ☐ other, please describe: _____ ☐

V. Is there any sleeping difficulty? .. .. .. ☐ No. ☐ Yes—mild. ☐ Yes—severe. ☐

If "Yes", is it difficulty in

- ☐ getting off to sleep
- ☐ waking during the night ☐
- ☐ waking early in the morning
- ☐ other, please describe: _____

Below are a series of descriptions of behaviour often shown by children. After each statement are three columns—Doesn't Apply", "Applies Somewhat", and "Certainly Applies". If your child definitely shows the behaviour described by e statement place a cross in the box under "Certainly Applies". If he or she shows the behaviour described by the atement but to a lesser degree or less often, place a cross under "Applies Somewhat". If, as far as you are aware, your ild does not show the behaviour, place a cross under "Doesn't Apply".

Please put one cross against each statement.

TATEMENT	Doesn't Apply	Applies Somewhat	Certainly Applies	FOR OFFICE USE ONLY
. Very restless, has difficulty staying seated for long	☐	☐	☐	☐
. Squirmy, fidgety child	☐	☐	☐	☐
. Often destroys own or others' property	☐	☐	☐	☐
. Frequently fights *or* is extremely quarrelsome with other children ..	☐	☐	☐	☐
. Not much liked by other children	☐	☐	☐	☐
. Often worried, worries about many things	☐	☐	☐	☐
. Tends to be on own—rather solitary	☐	☐	☐	☐
. Irritable. Is quick to 'fly off the handle'	☐	☐	☐	☐
. Often appears miserable, unhappy, tearful or distressed	☐	☐	☐	☐
. Has twitches, mannerisms or tics of the face or body	☐	☐	☐	☐
. Frequently sucks thumb or finger	☐	☐	☐	☐
. Frequently bites nails or fingers	☐	☐	☐	☐
. Is often disobedient	☐	☐	☐	☐
. Cannot settle to anything for more than a few moments	☐	☐	☐	☐
. Tends to be fearful or afraid of new things or new situations ..	☐	☐	☐	☐
. Fussy or over-particular child	☐	☐	☐	☐
. Often tells lies	☐	☐	☐	☐
. Bullies other children	☐	☐	☐	☐

RE THERE ANY OTHER PROBLEMS?

Signature: Mr./Mrs._____

THANK YOU VERY MUCH FOR YOUR HELP

FOR OFFICE USE ONLY

SCALE B(2)

TO BE COMPLETED BY TEACHERS

Name of Child: Boy/Girl School

Address of Child:

Date of Birth: Form:

Below are a series of descriptions of behaviour often shown by children. After each statement are three columns:— "Doesn't Apply", "Applies Somewhat" and "Certainly Applies". If the child definitely shows the behaviour described by the statement place a cross in the box under Column 2 "Certainly Applies". If the child shows the behaviour described by the statement but to a lesser degree or less often place a cross in the box under Column 1 "Applies Somewhat". If, as far as you are aware, the child does not show the behaviour, place a cross in the box under Column 0 "Doesn't Apply".

Please complete on basis of child's behaviour **IN THE PAST 12 MONTHS.**

Put ONE cross against EACH statement. Thank you.

STATEMENT	0 Doesn't Apply	1 Applies Somewhat	2 Certainly Applies	FOR OFFICE USE ONLY
1. Very restless, has difficulty staying seated for long	☐	☐	☐	☐
2. Truants from school	☐	☐	☐	☐
3. Squirmy, fidgety child	☐	☐	☐	☐
4. Often destroys or damages own or others' property	☐	☐	☐	☐
5. Frequently fights *or* is extremely quarrelsome with other children ..	☐	☐	☐	☐
6. Not much liked by other children	☐	☐	☐	☐
7. Often worried, worries about many things	☐	☐	☐	☐
8. Tends to be on own—rather solitary	☐	☐	☐	☐
9. Irritable. Touchy. Is quick to 'fly off the handle'	☐	☐	☐	☐
10. Often appears miserable, unhappy, tearful or distressed	☐	☐	☐	☐
11. Has twitches, mannerisms, or tics of the face or body	☐	☐	☐	☐
12. Frequently sucks thumb or finger	☐	☐	☐	☐
13. Frequently bites nails or fingers	☐	☐	☐	☐

STATEMENT	0 Doesn't Apply	1 Applies Somewhat	2 Certainly Applies	FOR OFFICE USE ONLY
14. Tends to be absent from school for trivial reasons	☐	☐	☐	☐
15. Is often disobedient	☐	☐	☐	☐
16. Cannot settle to anything for more than a few moments	☐	☐	☐	☐
17. Tends to be fearful or afraid of new things or new situations ..	☐	☐	☐	☐
18. Fussy or over-particular child	☐	☐	☐	☐
19. Often tells lies	☐	☐	☐	☐
20. Has stolen things on one or more occasions in the past 12 months ..	☐	☐	☐	☐
21. Unresponsive, inert or apathetic	☐	☐	☐	☐
22. Often complains of aches or pains	☐	☐	☐	☐
23. Has had tears on arrival at school *or* has refused to come into the building in the past 12 months	☐	☐	☐	☐
24. Has a stutter or stammer	☐	☐	☐	☐
25. Resentful *or* aggressive when corrected	☐	☐	☐	☐
26. Bullies other children	☐	☐	☐	☐

Is there anything else unusual about this child's behaviour?—or are there any other comments you would like to make? ☐☐

.....

.....

.....

..... ☐

.....

.....

.....

..... ☐

Signature: Mr./Mrs./Miss.....

Date : .....

THANK YOU VERY MUCH FOR YOUR HELP

APPENDIX 2

MEASURES USED IN THE STUDIES

APPENDIX 2 BIOGRAPHICAL AND ENVIRONMENTAL QUESTIONNAIRE

1. Child's Name .....

2. Date of Birth .....

3. Place of Birth .....

4. Name of Present School .....

5. Number and ages of children in the household .....

.....

6. Adults in the household .....

7. Who normally cares for the child? .....

8. Is there a father or father substitute present? .....

9. How old was the child when he/she started school? .....

10. How many schools has the child attended? .....

11. Is the child happy at school?
Happy .....
Not altogether happy .....
Unhappy .....
Don't know .....

12. Details of paternal absence (if any) .....

.....

.....

13. Does either parent read with the child?

	At least once a week	Occasionally	Never or hardly ever	Don't know of N/A
Mother				
Father				

14. Does either parent take the child on outings (picnics, visiting, shopping, etc.)?

	At least once a week	Occasionally	Never or hardly ever	Don't know or N/A
Mother				
Father				

Appendix 2 (Cont.)

Biographical and Environmental Questionnaire (Cont.)

15. Does father take a big part in managing the child or does he leave it mainly to the mother?

    Takes an equal part with mother .....
    Smaller, but significant part .....
    Very small part or leaves it to mother .....
    Don't know or N/A .....

16. Occupation of father .....

17. Occupation of mother (if applicable) .....

18. Has mother been in paid work since the birth of the child? .....

19. Details of accommodation .....

<u>Second study only</u>

20. Are any practical problems experienced by mother due to father absence?

    .....

21. Are any emotional problems experienced by mother due to father absence?

    .....

22. What are the biggest problems, if any, for mothers bringing up children alone?

    .....

Appendix 2 (Cont.)

INDEX OF COMMUNICATION AND CONTROL SCHEDULE D

Here are some ideas about what toys are for. Please put a one against the use that you think is most important, two against the next most important until six for the least important.

A. To keep children amused by themselves

B. So that they can play with other children

C. So that they can find out about things

D. To free the mother so that she can do other things

E. To help them when they go to school

F. To show that mother cares when she has been away

Appendix 2 (Cont.)

INDEX OF COMMUNICATION AND CONTROL SCHEDULE E

Besides every day questions children often ask about things which are difficult to explain to a child. What do you find you mostly do?

	Never	Sometimes	Often
1. Try and change the subject			
2. Make up something until they are older			
3. Tell them a little bit until they ask again			
4. Tell them as much as you can			
5. Tell them to ask Daddy			

Appendix 2 (Cont.)

INDEX OF COMMUNICATION AND CONTROL SCHEDULE F

As well as asking questions children also chatter quite a lot. I'd like you to imagine yourself in the following situations and say what you usually do

	Tell him/her to stop	Tell him/her to wait	Tell him/her quickly	Chat to him/her
1. You are working around the house				
2. You are walking along the street				
3. You are trying to relax				
4. You are talking to your husband				
5. You are in a shop				
6. You are in a bus				
7. At meal times				

Appendix 2 (Cont.)

INDEX OF COMMUNICATION AND CONTROL CONTROL QUESTIONNAIRE

Apart from answering questions, mothers have to deal with problems children set them. Here are some every day problems which mothers have told us come up with children. If they have not happened to you please try to imagine what you would do.

1. Suppose you thought it was time that went to bed but he/she started to cry because he/she wanted to watch something on T.V. What would you say or do?

2. What would you say or do if wasn't watching what he/she was doing and split tea all over the table cloth?

3. What would you do if brought you a bunch of flowers and you found that he'd got them from a neighbour's garden?

4. Supposing that someone had forgotten to bring a present that they'd promised and he/she wouldn't talk to that person all day. What would you say or do?

5. Imagine one day when was supposed to be going to school he/she says 'I don't want to go to school today'. But he/she wasn't ill or anything, just didn't want to go to school. What would you say or do?

If after that he/she began crying and saying 'I don't want to go', what then?

6. Imagine when was much smaller (3 or 4) and he/she had been out shopping with you and when you got home you found that he/she had picked up something from one of the counters without you noticing. What would you say or do?

APPENDIX 3

RAW SCORES OBTAINED FROM THE FIRST AND SECOND STUDIES

3.1 The First Study

3.2 The Second Study: Children aged between 5 and 7 years

3.3 The Second Study: Children aged between 8 and 11 years

3.1 The First Study

Appendix 3.1.1

IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

		Intermittent Father Absence			Permanent Father Absence				No Father Absence			
		No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ
MALES	MIDDLE CLASS	1	98	97	99	21	111	106	114	36	101	91	113
		2	120	113	125	22	114	115	110	37	124	120	124
		3	129	129	124					38	138	142	127
		4	115	113	115					39	104	106	101
										40	109	108	110
	WORKING CLASS	5	116	115	114	23	94	96	93	41	104	92	115
		6	118	99	136	24	122	111	129	42	104	99	109
		7	118	114	120	25	100	95	106	43	97	95	100
		8	98	94	101	26	91	90	93	44	138	140	129
		9	110	106	113	27	121	111	128	45	83	84	86
						28	69	74	69				
FEMALES	MIDDLE CLASS	10	121	120	118	29	99	104	94	46	126	121	127
		11	115	108	120	30	112	121	100	47	108	97	118
		12	117	109	124	31	117	113	120	48	110	113	106
		13	89	86	94					49	129	118	136
		14	120	119	117								
		15	106	108	103								
	WORKING CLASS	16	94	87	103	32	107	104	108	50	110	105	114
		17	100	91	110	33	100	95	106	51	101	92	111
		18	100	105	94	34	104	101	106	52	103	101	104
		19	104	97	111	35	98	86	111	53	108	100	115
		20	102	94	111								

No = subject number

Appendix 3.1.2

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five verbal sub-tests of the WISC

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e
MALES	MIDDLE CLASS	1	10	6	15	6	11	21	9	12	10	9	15	36	6	11	9	6	11
		2	12	10	12	13	13	22	12	11	13	12	14	37	12	10	12	10	12
		3	13	18	18	8	16							38	18	16	13	20	16
		4	10	13	17	8	12							39	9	13	11	10	12
														40	7	10	17	8	14
	WORKING CLASS	5	10	13	18	13	8	23	12	12	7	6	10	41	7	8	15	7	7
		6	6	9	12	7	15	24	11	11	16	7	14	42	7	9	12	9	12
		7	13	14	11	10	13	25	10	8	8	10	10	43	7	12	7	8	12
		8	5	12	10	6	12	26	8	7	10	9	8	44	12	19	18	15	18
		9	7	15	9	10	14	27	7	14	14	11	13	45	8	6	7	10	6
								28	5	6	9	5	4						
FEMALES	MIDDLE CLASS	10	14	7	17	15	13	29	7	11	13	9	13	46	12	14	15	10	16
		11	10	11	14	9	12	30	12	12	16	14	13	47	12	9	10	8	9
		12	9	9	14	13	12	31	7	13	15	10	15	48	7	13	11	16	13
		13	7	7	14	5	6							49	10	13	14	15	12
		14	7	17	12	13	16												
		15	5	12	13	13	13												
	WORKING CLASS	16	7	9	10	9	5	32	14	9	9	10	11	50	10	12	9	11	12
		17	7	9	12	5	10	33	7	8	13	7	11	51	7	9	10	9	9
		18	11	15	9	8	11	34	9	9	12	10	11	52	10	15	6	9	11
		19	8	11	10	9	10	35	6	7	10	5	11	53	10	6	10	9	15
		20	6	9	13	7	10												

No = subject number

a General Information

b Comprehension

c Arithmetic

d Similarities

e Vocabulary

Appendix 3.1.3

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test f	g	h	i	j	No	Sub-test f	g	h	i	j	No	Sub-test f	g	h	i	j
MALES	MIDDLE CLASS	1	12	5	15	9	8	21	11	13	14	10	12	36	8	10	15	12	14
		2	9	13	18	16	12	22	8	12	13	11	13	37	12	11	10	14	10
		3	14	13	15	11	14							38	7	14	17	16	15
		4	14	11	11	15	10							39	10	10	12	11	8
														40	10	6	15	16	10
	WORKING CLASS	5	12	11	13	12	12	23	5	12	12	7	9	41	14	10	15	11	11
		6	16	15	19	17	9	24	15	14	12	14	16	42	11	11	14	11	10
		7	10	12	13	14	15	25	11	11	9	11	12	43	10	10	11	13	6
		8	11	13	14	8	7	26	9	5	9	10	12	44	15	17	14	14	11
		9	13	13	9	15	9	27	14	12	15	15	14	45	7	9	10	10	4
								28	4	4	5	6	9						
FEMALES	MIDDLE CLASS	10	13	18	16	16	10	29	10	9	11	8	8	46	14	13	12	16	14
		11	10	12	16	16	10	30	9	11	10	12	8	47	13	14	12	10	14
		12	14	12	13	17	11	31	7	8	6	20	14	48	9	9	11	13	12
		13	9	9	10	10	8							49	17	15	19	11	14
		14	15	10	16	14	7												
		15	15	10	10	13	6												
	WORKING CLASS	16	11	8	12	11	10	32	10	10	15	11	10	50	10	13	8	16	13
		17	13	11	12	11	10	33	11	9	11	13	10	51	12	11	15	9	11
		18	8	12	5	11	9	34	13	10	10	9	12	52	8	7	9	13	16
		19	13	12	12	11	10	35	9	15	11	11	12	53	10	11	14	12	14
		20	13	8	13	14	10												

No = subject number

f Picture Completion

g Picture Arrangement

h Block Design

i Object Assembly

j Coding

Appendix 3.1.4

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	6	21	13	36	4
		2	11	22	8	37	9
		3	14			38	9
		4	2			39	2
						40	9
	WORKING CLASS	5	3	23	6	41	8
		6	12	24	6	42	6
		7	14	25	14	43	18
		8	13	26	15	44	5
		9	8	27	18	45	18
				28	2		
FEMALES	MIDDLE CLASS	10	5	29	1	46	10
		11	9	30	6	47	5
		12	5	31	5	48	11
		13	20			49	8
		14	2				
		15	8				
	WORKING CLASS	16	15	32	6	50	5
		17	10	33	19	51	2
		18	14	34	22	52	12
		19	17	35	16	53	6
		20	9				

No = subject number

Appendix 3.1.5

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	2	21	4	36	2
		2	2	22	1	37	2
		3	1			38	1
		4	1			39	0
						40	3
	WORKING CLASS	5	0	23	0	41	1
		6	1	24	0	42	2
		7	0	25	1	43	5
		8	1	26	3	44	0
		9	2	27	2	45	2
				28	0		
FEMALES	MIDDLE CLASS	10	0	29	0	46	2
		11	0	30	0	47	2
		12	1	31	2	48	2
		13	2			49	1
		14	1				
		15	0				
	WORKING CLASS	16	4	32	1	50	2
		17	1	33	2	51	0
		18	4	34	4	52	2
		19	1	35	1	53	2
		20	1				

N = subject number

Appendix 3.1.6

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	3	21	2	36	0
		2	2	22	1	37	1
		3	3			38	2
		4	0			39	0
						40	0
	WORKING CLASS	5	1	23	3	41	1
		6	2	24	0	42	2
		7	5	25	3	43	2
		8	2	26	3	44	1
		9	1	27	4	45	4
				28	0		
FEMALES	MIDDLE CLASS	10	1	29	0	46	2
		11	1	30	3	47	1
		12	0	31	0	48	1
		13	4			49	0
		14	0				
		15	0				
	WORKING CLASS	16	1	32	2	50	0
		17	1	33	3	51	0
		18	2	34	3	52	3
		19	5	35	5	53	0
		20	1				

No = subject number

Appendix 3.1.7

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 5	No Absence Group N = 9
Item D	Does your child wet the bed?		
YES	1	0	0
NO	9	5	9
Item III	Does your child ever steal things?		
YES	2	1	0
NO	8	4	9
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	3	0	2
NO	7	5	7
Item 5	Not much liked by other children		
YES	0	0	1
NO	10	5	8
Item 18	Bullies other children		
YES	0	0	1
NO	10	5	8

Appendix 3.1.8

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 10	No Absence Group N = 9
Item D	Does your child wet the bed?		
YES	3	1	0
NO	7	9	9
Item III	Does your child ever steal things?		
YES	2	2	0
NO	8	8	9
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	3	5	3
NO	7	5	6
Item 5	Not much liked by other children		
YES	1	0	0
NO	9	10	9
Item 18	Bullies other children		
YES	1	3	1
NO	9	7	8

Appendix 3.1.9

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	0	21	11	36	0
		2	0	22	9	37	1
		3	0			38	1
		4	0			39	0
						40	2
	WORKING CLASS	5	9	23	9	41	0
		6	0	24	2	42	4
		7	12	25	17	43	9
		8	8	26	4	44	0
		9	3	27	0	45	9
				28	5		
FEMALES	MIDDLE CLASS	10	0	29	0	46	8
		11	0	30	4	47	0
		12	0	31	2	48	3
		13	7			49	4
		14	0				
		15	0				
	WORKING CLASS	16	1	32	13	50	2
		17	1	33	4	51	1
		18	12	34	1	52	7
		19	5	35	10	53	2
		20	6				

No = subject number

Appendix 3.1.10

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	0	21	8	36	0
		2	0	22	4	37	1
		3	0			38	0
		4	0			39	0
						40	2
	WORKING CLASS	5	2	23	3	41	0
		6	0	24	0	42	3
		7	2	25	1	43	4
		8	3	26	0	44	0
		9	2	26	0	45	1
				27	0		
FEMALES	MIDDLE CLASS	10	0	29	0	46	5
		11	0	30	1	47	0
		12	0	31	2	48	3
		13	5			49	1
		14	0				
		15	0				
	WORKING CLASS	16	0	32	1	50	0
		17	0	33	2	51	0
		18	6	34	0	52	2
		19	1	35	0	53	0
		20	3				

No = subject number

Appendix 3.1.11

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	0	21	0	36	0
		2	0	22	0	37	0
		3	0			38	0
		4	0			39	0
						40	0
	WORKING CLASS	5	3	23	2	41	0
		6	0	24	0	42	0
		7	1	25	8	43	0
		8	0	26	2	44	0
		9	0	27	0	45	1
				28	2		
FEMALES	MIDDLE CLASS	10	0	29	0	46	0
		11	0	30	0	47	0
		12	0	31	0	48	0
		13	0			49	0
		14	0				
		15	0				
	WORKING CLASS	16	0	32	7	50	0
		17	0	33	0	51	0
		18	1	34	0	52	0
		19	0	35	3	53	0
		20	0				

No = subject number

Appendix 3.1.12

Responses made by teachers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 5	No Absence Group N = 9
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	0	0	0
NO	10	5	9
Item 6	Not much liked by other children		
YES	0	0	0
NO	10	5	9
Item 20	Has stolen things on one or more occasions in the past year		
YES	0	0	0
NO	10	5	9
Item 26	Bullies other children		
YES	0	0	0
NO	10	5	9

Appendix 3.1.13

Responses made by teachers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 10	No Absence Group N = 9
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	3	6	0
NO	7	4	9
Item 6	Not much liked by other children		
YES	2	2	1
NO	8	8	8
Item 20	Has stolen things on one or more occasions in the past year		
YES	0	1	0
NO	10	9	9
Item 26	Bullies other children		
YES	1	4	0
NO	9	6	9

Appendix 3.1.14

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 5	No Absence Group N = 9
Item 10	How many schools has the child attended? More than one?		
YES	2	0	1
NO	8	5	8
Item 11	Is the child happy at school?		
YES	8	5	8
NO	2	0	1
Item 13a	Does mother read with the child?		
YES	10	5	8
NO	0	0	1
Item 13b	Does father read with the child?		
YES	9		9
NO	1		0
Item 14a	Does mother take child on outings?		
YES	10	5	9
NO	0	0	0
Item 14b	Does father take the child on outings?		
YES	10		9
NO	0		0
Item 15	Does the father take a big part in managing the child?		
YES	9		8
NO	1		1
Item 18	Has mother been in paid work since the birth of the child?		
YES	2	3	5
NO	8	2	4
Item 19	Does the family own its own house?		
YES	4	4	9
NO	6	1	0

Appendix 3.1.15

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 10	No Absence Group N = 9
Item 10	How many schools has the child attended? More than one?		
YES	1	2	1
NO	9	8	8
Item 11	Is the child happy at school?		
YES	9	6	7
NO	1	4	2
Item 13a	Does mother read with the child?		
YES	10	8	9
NO	0	2	0
Item 13b	Does father read with the child?		
YES	8		8
NO	2		1
Item 14a	Does mother take child on outings?		
YES	10	8	9
NO	0	2	0
Item 14b	Does father take the child on outings?		
YES	7		9
NO	3		0
Item 15	Does the father take a big part in managing the child?		
YES	6		9
NO	4		0
Item 18	Has mother been in paid work since the birth of the child?		
YES	8	4	6
NO	2	6	3
Item 19	Does the family own its own house?		
YES	2	1	2
NO	8	9	7

3.2 The Second Study: Children aged between 5 and 7 years

Appendix 3.2.1

IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

		Intermittent Father Absence			Permanent Father Absence				No Father Absence			
		No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ
MALES	MIDDLE CLASS	1	110	97	122	21	123	115	127	36	132	134	124
		2	107	100	113	22	96	109	83	37	131	126	129
		3	143	144	133	23	120	111	125	38	104	105	101
		4	109	100	118					39	108	118	96
		5	106	106	104					40	121	125	113
	WORKING CLASS	6	104	94	115	24	98	95	101	41	104	94	115
		7	92	82	104	25	73	57	96	42	118	120	113
		8	100	84	118	26	111	101	120	43	117	113	120
		9	123	118	121	27	108	96	120	44	102	96	108
		10	109	101	117	28	100	97	103				
FEMALES	MIDDLE CLASS	11	117	108	124	29	128	133	117	45	125	124	121
		12	117	113	120	30	107	113	99	46	120	109	129
		13	118	114	120	31	131	129	128	47	128	118	133
		14	128	133	117					48	118	110	124
		15	115	111	117								
	WORKING CLASS	16	75	71	85	32	94	90	100	49	115	110	118
		17	114	118	107	33	108	103	113	50	96	94	99
		18	93	79	111	34	99	100	99	51	98	90	107
		19	117	105	127	35	112	104	118	52	93	87	100
		20	83	82	87								

No = subject number

Appendix 3.2.2

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five verbal sub-tests of the WISC.

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e
MALES	MIDDLE CLASS	1	7	9	14	8	10	21	9	11	10	15	17	36	12	16	18	14	17
		2	10	6	15	8	11	22	16	6	10	13	12	37	15	14	12	15	15
		3	15	19	18	16	17	23	14	12	10	11	12	38	7	14	11	8	14
		4	6	7	13	12	12							39	10	17	12	10	15
		5	12	9	10	9	15							40	13	20	11	10	16
	WORKING CLASS	6	4	12	10	8	11	24	6	7	10	10	13	41	6	9	10	10	10
		7	7	3	9	10	7	25	4	3	3	3	3	42	10	16	16	8	16
		8	6	3	10	7	11	26	6	15	11	12	7	43	10	13	12	10	15
		9	8	17	10	13	16	27	6	10	11	10	10	44	9	13	12	7	6
		10	10	7	12	11	11	28	9	6	11	8	14						
FEMALES	MIDDLE CLASS	11	11	5	16	11	13	29	14	19	16	10	17	45	14	13	17	11	14
		12	9	15	15	10	11	30	14	9	13	12	12	46	10	14	16	7	10
		13	8	14	16	13	10	31	15	14	17	11	16	47	12	12	14	13	13
		14	15	17	17	11	16							48	12	14	12	8	12
		15	12	11	13	13	10												
	WORKING CLASS	16	4	2	8	6	7	32	6	9	10	7	10	49	9	12	14	8	15
		17	12	11	13	15	13	33	7	10	8	14	13	50	7	11	8	7	12
		18	5	6	7	10	5	34	10	11	10	9	10	51	6	8	12	9	7
		19	9	5	12	14	14	35	8	13	12	9	11	52	6	5	10	9	10
		20	6	9	8	7	6												

No = subject number

a General Information

b Comprehension

c Arithmetic

d Similarities

e Vocabulary

Appendix 3.2.3

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test					No	Sub-test					No	Sub-test				
			f	g	h	i	j		f	g	h	i	j		f	g	h	i	j
MALES	MIDDLE CLASS	1	14	15	10	19	8	21	13	14	16	15	11	36	12	16	13	14	12
		2	9	13	10	12	15	22	12	9	5	5	7	37	12	16	16	16	11
		3	13	20	8	18	15	23	14	11	14	13	16	38	8	12	8	9	14
		4	11	12	16	12	12							39	12	10	10	6	9
		5	11	8	13	12	9							40	15	12	13	10	9
	WORKING CLASS	6	11	11	17	13	9	24	11	10	9	10	11	41	9	13	13	11	15
		7	12	13	8	11	9	25	9	10	7	9	12	42	8	13	15	12	11
		8	17	8	12	10	16	26	13	15	13	13	10	43	16	14	12	10	12
		9	11	14	17	12	11	27	12	13	13	17	9	44	13	13	13	8	9
		10	12	14	14	14	8	28	10	11	13	11	7						
FEMALES	MIDDLE CLASS	11	13	13	13	13	15	29	11	9	14	13	15	45	10	12	17	14	12
		12	13	15	12	13	11	30	9	9	12	12	7	46	14	15	14	10	18
		13	11	13	12	17	11	31	12	14	15	15	14	47	12	15	17	17	13
		14	12	15	11	13	11							48	11	13	16	9	18
		15	13	15	13	12	9												
	WORKING CLASS	16	8	9	9	7	8	32	9	10	12	10	9	49	15	15	13	11	9
		17	9	15	10	10	11	33	13	13	6	13	14	50	7	11	12	8	11
		18	13	11	12	9	13	34	12	9	11	6	11	51	13	10	9	10	13
		19	11	17	18	12	11	35	11	14	14	12	12	52	11	7	13	12	7
		20	8	8	9	6	10												

No = subject number

f Picture Completion

g Picture Arrangement

h Block Design

i Object Assembly

j Coding

Appendix 3.2.4

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	2	21	3	36	8
		2	18	22	13	37	6
		3	9	23	13	38	9
		4	10			39	12
		5	15			40	22
	WORKING CLASS	6	5	24	19	41	9
		7	10	25	16	42	6
		8	12	26	10	43	8
		9	4	27	1	44	6
		10	3	28	6		
REMALES	MIDDLE CLASS	11	9	29	8	45	3
		12	2	30	7	46	9
		13	15	31	8	47	8
		14	2			48	12
		15	6				
	WORKING CLASS	16	7	32	5	49	9
		17	9	33	4	50	6
		18	20	34	16	51	7
		19	7	35	23	52	8
		20	14				

No = subject number

Appendix 3.2.5

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	1	21	0	36	4
		2	1	22	1	37	0
		3	1	23	2	38	1
		4	2			39	2
		5	4			40	7
	WORKING CLASS	6	0	24	1	41	0
		7	1	25	2	42	0
		8	3	26	1	43	1
		9	1	27	0	44	3
		10	1	28	1		
FEMALES	MIDDLE CLASS	11	1	29	2	45	0
		12	0	30	0	46	1
		13	4	31	2	47	0
		14	1			48	4
		15	1				
	WORKING CLASS	16	0	32	0	49	1
		17	0	33	3	50	0
		18	4	34	1	51	2
		19	3	35	0	52	1
		20	2				

No = subject number

Appendix 3.2.6

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	0	21	0	36	2
		2	3	22	3	37	1
		3	2	23	4	38	3
		4	0			39	3
		5	4			40	3
	WORKING CLASS	6	0	24	3	41	0
		7	4	25	1	42	3
		8	2	26	1	43	1
		9	0	27	0	44	1
		10	1	28	1		
FEMALES	MIDDLE CLASS	11	0	29	2	45	0
		12	0	30	0	46	1
		13	1	31	1	47	1
		14	0			48	1
		15	0				
	WORKING CLASS	16	1	32	0	49	2
		17	3	33	2	50	1
		18	1	34	1	51	1
		19	0	35	4	52	2
		20	3				

No = subject number

Appendix 3.2.7

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 9
Item D	Does your child wet the bed?		
YES	2	0	0
NO	8	6	9
Item III	Does your child ever steal things?		
YES	1	1	0
NO	9	5	9
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	1	1	3
NO	9	5	6
Item 5	Not much liked by other children		
YES	1	1	3
NO	9	5	6
Item 18	Bullies other children		
YES	1	1	1
NO	9	5	8

Appendix 3.2.8

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 9	No Absence Group N = 8
Item D	Does your child wet the bed?		
YES	3	4	0
NO	7	5	8
Item III	Does your child ever steal things?		
YES	2	2	0
NO	8	7	8
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	3	4	2
NO	7	5	6
Item 5	Not much liked by other children		
YES	4	2	2
NO	6	7	6
Item 18	Bullies other children		
YES	2	3	0
NO	8	6	8

Appendix 3.2.9

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	5	21	0	36	4
		2	5	22	8	37	10
		3	9	23	0	38	8
		4	1			39	5
		5	1			40	5
	WORKING CLASS	6	1	24	16	41	7
		7	10	25	18	42	3
		8	0	26	4	43	4
		9	7	27	3	44	8
		10	1	28	10		
FEMALES	MIDDLE CLASS	11	4	29	2	45	0
		12	2	30	4	46	1
		13	5	31	0	47	1
		14	0			48	4
		15	6				
	WORKING CLASS	16	0	32	6	49	1
		17	1	33	5	50	0
		18	2	34	1	51	4
		19	5	35	8	52	1
		20	15				

No = subject number

Appendix 3.2.10

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	1	21	0	36	2
		2	1	22	0	37	2
		3	2	23	0	38	0
		4	1			39	2
		5	0			40	3
	WORKING CLASS	6	0	24	6	41	5
		7	3	25	4	42	0
		8	0	26	0	43	2
		9	2	27	0	44	3
		10	1	28	3		
FEMALES	MIDDLE CLASS	11	0	29	1	45	0
		12	1	30	1	46	0
		13	3	31	0	47	0
		14	0			48	3
		15	2				
	WORKING CLASS	16	0	32	3	49	0
		17	0	33	2	50	0
		18	0	34	0	51	0
		19	4	35	1	52	0
		20	1				

No = subject number

Appendix 3.2.11

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	2	21	0	36	1
		2	1	22	3	37	2
		3	0	23	0	38	3
		4	0			39	1
		5	0			40	0
	WORKING CLASS	6	0	24	2	41	0
		7	2	25	4	42	3
		8	0	26	2	43	0
		9	0	27	0	44	0
		10	0	28	0		
FEMALES	MIDDLE CLASS	11	0	29	0	45	0
		12	0	30	0	46	0
		13	0	31	0	47	0
		14	0			48	0
		15	0				
	WORKING CLASS	16	0	32	0	49	0
		17	1	33	1	50	0
		18	0	34	0	51	4
		19	0	35	2	52	0
		20	7				

No = subject number

Appendix 3.2.12

Responses made by teachers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 9
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	1	1	0
NO	9	5	9
Item 6	Not much liked by other children		
YES	3	0	2
NO	7	6	7
Item 20	Has stolen things on one or more occasions in the past year		
YES	0	0	0
NO	10	6	9
Item 26	Bullies other children		
YES	0	1	1
NO	10	5	8

Appendix 3.2.13

Responses made by teachers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 9	No Absence Group N = 9
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	1	3	0
NO	9	6	9
Item 6	Not much liked by other children		
YES	1	4	1
NO	9	5	8
Item 20	Has stolen things on one or more occasions in the past year		
YES	2	0	0
NO	8	9	9
Item 26	Bullies other children		
YES	1	1	0
NO	9	8	9

Appendix 3.2.14

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule D of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	11	21	11	36	9
		2	11	22	11	37	10
		3	9	23	11	38	11
		4	11			39	10
		5	11			40	11
	WORKING CLASS	6	9	24	5	41	11
		7	11	25	9	42	10
		8	8	26	11	43	11
		9	11	27	9	44	11
		10	9	28	2		
FEMALES	MIDDLE CLASS	11	8	29	10	45	11
		12	9	30	9	46	11
		13	11	31	9	47	11
		14	11			48	10
		15	9				
	WORKING CLASS	16	6	32	11	49	11
		17	10	33	11	50	6
		18	10	34	11	51	10
		19	9	35	9	52	7
		20	8				

No = subject number

Appendix 3.2.15

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule E of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	2	21	5	36	4
		2	3	22	1	37	4
		3	3	23	4	38	3
		4	1			39	4
		5	5			40	1
	WORKING CLASS	6	3	24	5	41	3
		7	4	25	3	42	2
		8	2	26	3	43	3
		9	5	27	3	44	5
		10	4	28	4		
FEMALES	MIDDLE CLASS	11	4	29	6	45	4
		12	4	30	4	46	3
		13	6	31	5	47	3
		14	5			48	4
		15	4				
	WORKING CLASS	16	3	32	5	49	5
		17	4	33	1	50	5
		18	5	34	2	51	3
		19	3	35	5	52	3
		20	4				

No = subject number

Appendix 3.2.16

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule F of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	16	21	17	36	15
		2	17	22	14	37	15
		3	11	23	17	38	16
		4	11			39	16
		5	15			40	13
	WORKING CLASS	6	13	24	18	41	14
		7	10	25	11	42	15
		8	10	26	11	43	13
		9	9	27	9	44	15
		10	8	28	16		
FEMALES	MIDDLE CLASS	11	15	29	14	45	16
		12	17	30	19	46	17
		13	16	31	15	47	13
		14	16			48	15
		15	17				
	WORKING CLASS	16	15	32	17	49	13
		17	18	33	13	50	18
		18	14	34	7	51	18
		19	15	35	10	52	13
		20	15				

No = subject number

Appendix 3.2.17

The incidence of avoidance, punishment and support responses to the items of the Control Questionnaire by mothers of children aged between five and seven years

RESPONSE	ABSENCE GROUPS	MALES				FEMALES			
		MIDDLE CLASS		WORKING CLASS		MIDDLE CLASS		WORKING CLASS	
		ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N
Avoidance	Intermittent	0 0 0 1 0 0	5	2 1 0 1 1 0	5	1 0 0 0 0 0	5	0 0 1 1 0 0	5
	Permanent	0 0 0 0 0 0	3	0 1 0 2 1 1	5	1 0 0 0 0 0	3	1 0 0 0 1 0	4
	No	0 0 0 1 1 0	5	0 0 1 0 1 1	5	0 0 0 0 0 0	4	1 0 1 0 0 0	4
Punishment	Intermittent	1 5 1 0 0 1	5	1 3 3 0 0 3	5	1 5 1 0 0 1	5	1 3 2 1 1 3	5
	Permanent	2 2 1 0 0 2	3	5 4 2 1 3 2	5	1 2 0 1 1 1	3	1 3 2 1 0 1	4
	No	3 3 1 1 1 0	5	4 4 2 0 0 0	5	2 3 0 0 0 0	4	2 2 1 1 2 1	4
Support	Intermittent	4 0 4 4 5 4	5	2 1 2 4 4 2	5	3 0 4 5 5 4	5	4 2 2 3 4 2	5
	Permanent	1 1 2 3 3 1	3	0 0 3 2 1 2	5	1 1 3 2 2 2	3	2 1 2 3 3 3	4
	No	2 2 4 3 3 5	5	0 0 1 4 3 3	5	2 1 4 4 4 4	4	1 2 2 3 2 3	4

N = number of subjects

Appendix 3.2.18

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 9
Item 10	How many schools has the child attended?		More than one?
YES	2	2	2
NO	8	4	7
Item 11	Is the child happy at school?		
YES	10	6	7
NO	0	0	2
Item 13a	Does mother read with the child?		
YES	10	6	9
NO	0	0	0
Item 13b	Does father read with the child?		
YES	10		8
NO	0		1
Item 14a	Does mother take child on outings?		
YES	10	6	8
NO	0	0	1
Item 14b	Does father take the child on outings?		
YES	10		9
NO	0		0

Appendix 3.2.18 (cont.)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 9
Item 15	Does the father take a big part in managing the child?		
YES	9		8
NO	1		1
Item 18	Has mother been in paid work since the birth of the child?		
YES	3	4	5
NO	7	2	4
Item 19	Does the family own its own house?		
YES	7	5	9
NO	3	1	0
Item 20	Are any practical problems experienced by the mother due to father absence?		
YES	8	5	
NO	2	1	
Item 21	Are any emotional problems experienced by the mother due to father absence?		
YES	6	4	
NO	4	2	

Appendix 3.2.19

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 10	No Absence Group N = 8
Item 10	How many schools has the child attended? More than one?		
YES	4	1	0
NO	6	8	8
Item 11	Is the child happy at school?		
YES	10	7	5
NO	0	2	3
Item 13a	Does mother read with the child?		
YES	10	8	7
NO	0	1	1
Item 13b	Does father read with the child?		
YES	7		7
NO	3		1
Item 14a	Does mother take child on outings?		
YES	10	9	8
NO	0	0	0
Item 14b	Does father take the child on outings?		
YES	10		7
NO	0		1

Appendix 3.2.19 (cont.)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 10	No Absence Group N = 8
Item 15	Does the father take a big part in managing the child?		
YES	10		7
NO	0		2
Item 18	Has mother been in paid work since the birth of the child?		
YES	6	3	3
NO	4	6	6
Item 19	Does the family own its own house?		
YES	3	0	5
NO	7	9	3
Item 20	Are any practical problems experienced by the mother due to father absence?		
YES	8	8	
NO	2	1	
Item 21	Are any emotional problems experienced by the mother due to father absence?		
YES	7	8	
NO	3	1	

3.3 The Second Study: Children aged between 8 and 11 years

Appendix 3.3.1

IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

		Intermittent Father Absence			Permanent Father Absence				No Father Absence			
		No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ	No	Full Scale IQ	Verbal Scale IQ	Performance IQ
MALES	MIDDLE CLASS	1	112	120	100	21	107	104	108	35	109	110	106
		2	116	128	100	22	114	113	113	36	97	106	87
		3	114	120	104	23	105	105	113	37	101	104	99
		4	117	125	106					38	104	101	106
		5	101	92	111					39	131	119	138
	WORKING CLASS	6	94	97	92	24	134	120	143	40	109	106	111
		7	101	90	113	25	117	110	122	41	122	126	113
		8	125	111	135	26	135	121	143	42	128	123	129
		9	123	121	120	27	129	118	124	43	90	91	90
		10	85	79	94	28	105	97	113	44	120	116	121
FEMALES	MIDDLE CLASS	11	117	124	107	29	120	105	128	45	107	114	97
		12	93	96	90	30	120	118	118	46	120	113	124
		13	115	123	104	31	111	111	108	47	99	104	94
		14	112	118	103					48	131	124	132
		15	107	108	104					49	128	135	115
	WORKING CLASS	16	116	115	114	32	88	90	87	50	93	100	87
		17	109	101	115	33	117	113	114	51	97	97	97
		18	117	104	129	34	91	82	101	52	99	97	100
		19	115	105	122					53	114	101	125
		20	118	113	121					54	108	100	115

No = subject number

Appendix 3.3.2

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five verbal sub-tests of the WISC

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e	No	Sub-test a	b	c	d	e
MALES	MIDDLE CLASS	1	12	8	15	16	15	21	6	14	8	13	12	35	13	11	8	13	13
		2	14	15	13	15	15	22	12	10	13	10	15	36	10	9	10	13	13
		3	13	12	14	14	13	23	4	16	12	10	12	37	7	13	9	12	12
		4	11	15	16	14	14							38	8	12	10	11	10
		5	5	10	10	9	10							39	11	12	13	14	15
	WORKING CLASS	6	9	7	9	8	15	24	11	13	14	12	16	40	9	12	10	11	13
		7	7	3	11	9	12	25	10	12	10	14	12	41	13	15	13	15	15
		8	10	13	12	9	15	26	15	15	14	10	13	42	14	14	10	15	15
		9	12	10	13	15	17	27	11	15	12	10	16	43	7	12	6	8	10
		10	5	6	8	6	8	28	8	10	13	6	9	44	10	13	12	14	14
FEMALES	MIDDLE CLASS	11	10	16	14	14	15	29	9	12	8	13	12	45	13	14	9	10	15
		12	7	10	11	8	11	30	10	13	11	16	14	46	11	13	8	13	15
		13	12	15	12	14	15	31	10	14	11	11	13	47	9	15	9	10	10
		14	10	16	11	15	12							48	10	13	17	15	14
		15	7	12	13	12	12							49	13	13	18	17	17
	WORKING CLASS	16	12	11	13	13	13	32	8	10	6	8	10	50	11	7	11	12	9
		17	8	12	10	11	10	33	12	13	10	15	14	51	11	7	10	10	10
		18	10	13	9	9	12	34	5	5	7	7	12	52	9	10	8	12	9
		19	14	11	7	9	13							53	8	9	10	11	13
		20	11	15	16	15	13							54	9	11	7	13	10

No = subject number

a General Information

b Comprehension

c Arithmetic

d Similarities

e Vocabulary

Appendix 3.3.3

Scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

		Intermittent Father Absence						Permanent Father Absence						No Father Absence					
		No	Sub-test f	g	h	i	j	No	Sub-test f	g	h	i	j	No	Sub-test f	g	h	i	j
MALES	MIDDLE CLASS	1	8	12	9	12	9	21	13	9	11	13	10	35	13	13	12	10	6
		2	12	11	10	9	8	22	9	11	14	12	13	36	9	8	10	6	8
		3	11	12	10	10	10	23	10	14	6	9	14	37	11	11	9	11	7
		4	11	16	15	9	13							38	10	10	15	13	6
		5	11	12	12	14	9							39	14	15	20	14	14
	WORKING CLASS	6	8	15	7	7	7	24	18	18	18	15	21	40	10	13	10	10	15
		7	11	13	14	12	9	25	14	15	15	14	8	41	16	13	11	10	9
		8	17	12	16	15	15	26	15	16	19	18	13	42	15	13	13	11	19
		9	11	13	15	14	11	27	12	13	13	13	16	43	10	9	9	8	7
		10	8	7	13	12	6	28	10	10	13	13	13	44	14	11	14	16	10
FEMALES	MIDDLE CLASS	11	11	13	12	9	10	29	11	10	14	15	20	45	11	10	7	10	10
		12	8	5	9	10	11	30	10	10	15	14	14	46	17	11	11	14	14
		13	12	10	11	9	11	31	9	11	12	12	12	47	10	9	8	10	9
		14	14	12	9	6	11							48	15	15	14	10	19
		15	9	10	11	8	15							49	12	11	15	14	9
	WORKING CLASS	16	9	14	8	13	16	32	8	5	11	9	8	50	9	11	9	7	5
		17	12	10	14	13	12	33	12	11	13	12	12	51	10	9	7	9	13
		18	15	12	18	13	13	34	8	13	9	12	9	52	9	8	10	11	12
		19	12	17	13	12	12							53	13	16	15	9	15
		20	14	12	16	10	13							54	9	14	12	10	16

No = subject number

f Picture Completion

g Picture Arrangement

h Block Design

i Object Assembly

j Coding

Appendix 3.3.4

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	11	21	14	35	7
		2	4	22	18	36	22
		3	8	23	15	37	2
		4	9			38	9
		5	12			39	2
	WORKING CLASS	6	8	24	10	40	11
		7	9	25	17	41	6
		8	1	26	10	42	4
		9	15	27	4	43	8
		10	4	28	20	44	9
FEMALES	MIDDLE CLASS	11	3	29	3	45	5
		12	8	30	23	46	2
		13	6	31	6	47	8
		14	13			48	7
		15	5			49	11
	WORKING CLASS	16	13	32	10	50	7
		17	11	33	6	51	14
		18	2	34	12	52	11
		19	6			53	6
		20	10			54	10

No = subject number

Appendix 3.3.5

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	3	21	1	35	2
		2	0	22	3	36	4
		3	3	23	4	37	0
		4	0			38	0
		5	2			39	1
	WORKING CLASS	6	1	24	2	40	3
		7	2	25	3	41	0
		8	0	26	3	42	0
		9	4	27	0	43	0
		10	1	28	3	44	0
FEMALES	MIDDLE CLASS	11	0	29	1	45	0
		12	0	30	6	46	1
		13	0	31	2	47	1
		14	0			46	2
		15	0			47	2
	WORKING CLASS	16	4	32	0	50	2
		17	3	33	0	51	2
		18	0	34	2	52	1
		19	1			53	1
		20	5			54	0

No = subject number

Appendix 3.3.6

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	0	21	4	35	2
		2	0	22	2	36	2
		3	0	23	2	37	0
		4	3			38	1
		5	1			39	0
	WORKING CLASS	6	1	24	2	40	1
		7	1	25	1	41	2
		8	0	26	1	42	0
		9	1	27	0	43	2
		10	1	28	2	44	2
FEMALES	MIDDLE CLASS	11	1	29	0	45	0
		12	1	30	1	46	0
		13	0	31	0	47	1
		14	1			48	0
		15	0			49	1
	WORKING CLASS	16	0	32	0	50	0
		17	0	33	0	51	1
		18	0	34	2	52	3
		19	2			53	0
		20	0			54	0

No = subject number

Appendix 3.3.7

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 10
Item D	Does your child wet the bed?		
YES	1	1	1
NO	9	5	9
Item III	Does your child ever steal things?		
YES	1	1	1
NO	9	5	9
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	2	3	1
NO	8	3	9
Item 5	Not much liked by other children		
YES	3	3	2
NO	7	3	8
Item 18	Bullies other children		
YES	2	0	0
NO	8	6	10

Appendix 3.3.8

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 8	No Absence Group N = 10
Item D	Does your child wet the bed?		
YES	1	0	2
NO	9	8	8
Item III	Does your child ever steal things?		
YES	0	0	0
NO	10	8	10
Item 4	Frequently fights, is extremely quarrelsome with other children		
YES	0	3	4
NO	10	5	6
Item 5	Not much liked by other children		
YES	1	5	4
NO	9	3	6
Item 18	Bullies other children		
YES	0	1	1
NO	10	7	9

Appendix 3.3.9

Total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	12	21	14	35	4
		2	0	22	8	36	3
		3	0	23	13	37	1
		4	2			38	0
		5	10			39	1
	WORKING CLASS	6	0	24	0	40	0
		7	0	25	2	41	8
		8	0	26	1	42	1
		9	0	27	6	43	8
		10	0	28	8	44	10
FEMALES	MIDDLE CLASS	11	0	29	0	45	3
		12	4	30	9	46	1
		13	10	31	2	47	1
		14	1			48	3
		15	0			49	8
	WORKING CLASS	16	1	32	8	50	4
		17	0	33	1	51	0
		18	0	34	11	52	4
		19	0			53	0
		20	0			54	1

No = subject number

Appendix 3.3.10

Neuroticism sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	2	21	0	35	0
		2	0	22	3	36	0
		3	0	23	7	37	1
		4	1			38	0
		5	3			39	0
	WORKING CLASS	6	0	24	0	40	0
		7	0	25	1	41	1
		8	0	26	0	42	1
		9	0	27	0	43	4
		10	0	28	0	44	0
FEMALES	MIDDLE CLASS	11	0	29	0	45	1
		12	1	29	4	46	0
		13	1	30	2	47	0
		14	0			48	2
		15	0			49	4
	WORKING CLASS	16	0	32	1	50	1
		17	0	33	0	51	0
		18	0	34	2	52	1
		19	0			53	0
		20	0			54	0

No = subject number

Appendix 3.3.11

Anti-social behaviour sub-scale scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	1	21	5	35	0
		2	0	22	0	36	0
		3	0	23	0	37	0
		4	0			38	0
		5	2			39	0
	WORKING CLASS	6	0	24	0	40	0
		7	0	25	0	41	0
		8	0	26	0	42	0
		9	0	27	0	43	0
		10	0	28	0	44	3
FEMALES	MIDDLE CLASS	11	0	29	0	45	0
		12	1	30	1	46	0
		13	0	31	0	47	0
		14	0			48	0
		15	0			49	0
	WORKING CLASS	16	1	32	3	50	0
		17	0	33	0	51	0
		18	0	34	2	52	0
		19	0			53	0
		20	0			54	0

No = subject number

Appendix 3.3.12

Responses made by teachers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 10
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	1	1	0
NO	9	5	10
Item 6	Not much liked by other children		
YES	2	1	2
NO	8	5	8
Item 20	Has stolen things on one or more occasions in the past year		
YES	0	0	0
NO	10	6	10
Item 26	Bullies other children		
YES	1	1	0
NO	9	5	10

Appendix 3.3.13

Responses made by teachers of working class children experiencing intermittent, permanent or no father absence to individual items of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 8	No Absence Group N = 10
Item 5	Frequently fights or is extremely quarrelsome with other children		
YES	0	1	1
NO	10	7	9
Item 6	Not much liked by other children		
YES	1	1	1
NO	9	7	9
Item 20	Has stolen things on one or more occasions in the past year		
YES	0	0	0
NO	10	8	10
Item 26	Bullies other children		
YES	1	1	0
NO	9	7	10

Appendix 3.3.14

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule D of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	5	21	10	35	11
		2	11	22	10	36	11
		3	9	23	11	37	10
		4	10			38	11
		5	8			39	8
	WORKING CLASS	6	9	24	9	40	8
		7	8	25	9	41	6
		8	11	26	9	42	9
		9	9	27	7	43	10
		10	10	28	9	44	8
FEMALES	MIDDLE CLASS	11	11	29	11	45	9
		12	11	30	9	46	6
		13	11	31	10	47	11
		14	11			48	10
		15	11			50	10
	WORKING CLASS	16	11	32	11	50	8
		17	11	33	11	51	8
		18	11	34	11	52	10
		19	11			53	11
		20	11			54	11

No = subject number

Appendix 3.3.15

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule E of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	3	21	4	35	3
		2	4	22	4	36	4
		3	6	23	4	37	4
		4	4			38	4
		5	4			39	4
	WORKING CLASS	6	4	24	4	40	0
		7	4	25	3	41	1
		8	3	26	3	42	6
		9	5	27	4	43	4
		10	0	28	3	44	2
FEMALES	MIDDLE CLASS	11	3	29	4	45	5
		12	2	30	5	46	5
		13	2	31	3	47	2
		14	0			48	3
		15	4			49	2
	WORKING CLASS	16	4	32	3	50	4
		17	2	33	5	51	4
		18	4	34	6	52	3
		19	4			53	4
		20	1			54	3

No = subject number

Appendix 3.3.16

Scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule F of the Index of Communication and Control

		Intermittent Father Absence		Permanent Father Absence		No Father Absence	
		No		No		No	
MALES	MIDDLE CLASS	1	13	21	16	35	17
		2	16	22	15	36	14
		3	16	23	16	37	15
		4	16			38	17
		5	17			39	15
	WORKING CLASS	6	12	24	12	40	14
		7	9	25	16	41	12
		8	16	26	14	42	11
		9	16	27	16	43	15
		10	11	28	14	44	10
FEMALES	MIDDLE CLASS	11	13	29	15	45	18
		12	12	30	12	46	18
		13	15	31	15	47	16
		14	14			48	13
		15	11			49	13
	WORKING CLASS	16	17	32	18	50	11
		17	16	33	14	51	11
		18	15	34	10	52	12
		19	12			53	12
		20	10			54	8

No = subject number

Appendix 3.3.17

The incidence of avoidance, punishment and support responses to the items of the Control Questionnaire by mothers of children aged between eight and eleven years

RESPONSE	ABSENCE GROUPS	MALES				FEMALES			
		MIDDLE CLASS		WORKING CLASS		MIDDLE CLASS		WORKING CLASS	
		ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N	ITEM 1 2 3 4 5 6	N
Avoidance	Intermittent	1 1 0 1 1 0	5	0 0 0 2 0 0	5	0 0 0 0 0 0	5	1 0 1 1 0 0	5
	Permanent	0 0 0 0 0 0	3	2 0 0 0 0 0	5	0 1 0 1 1 0	3	0 0 0 0 0 0	3
	No	0 0 0 0 0 0	5	1 0 1 0 1 1	5	0 0 0 0 0 0	5	0 0 0 1 0 0	5
Punishment	Intermittent	4 2 0 0 1 1	5	2 4 1 0 0 1	5	3 4 0 1 2 0	5	2 4 0 1 1 1	5
	Permanent	3 2 0 0 0 0	3	3 5 0 0 2 1	5	2 2 0 1 0 0	3	1 3 0 0 1 1	3
	No	2 3 1 1 2 2	5	3 5 1 1 1 2	5	3 3 0 0 1 1	5	5 5 2 0 1 2	5
Support	Intermittent	0 2 5 4 4 4	5	3 1 4 3 5 4	5	2 1 5 4 3 5	5	2 1 4 3 4 4	5
	Permanent	0 1 3 3 3 3	3	3 0 5 5 3 4	5	1 0 3 1 2 3	3	2 0 3 3 2 2	3
	No	3 2 4 4 3 3	5	1 0 3 4 3 2	5	2 2 5 5 4 4	5	0 0 3 4 4 3	5

N = number of subjects

Appendix 3.3.18

Responses made by mothers of middle class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 10
Item 10	How many schools has the child attended? More than one?		
YES	10	3	4
NO	0	3	6
Item 11	Is the child happy at school?		
YES	10	6	9
NO	0	0	1
Item 13a	Does mother read with the child?		
YES	10	6	10
NO	0	0	0
Item 13b	Does father read with the child?		
YES	10		7
NO	0		3
Item 14a	Does mother take child on outings?		
YES	10	6	7
NO	0	0	3
Item 14b	Does father take the child on outings?		
YES	10		10
NO	0		0

Appendix 3.3.18 (cont.)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 6	No Absence Group N = 10
Item 15	Does the father take a big part in managing the child?		
YES	10		9
NO	0		1
Item 18	Has mother been in paid work since the birth of the child?		
YES	6	4	5
NO	4	2	5
Item 19	Does the family own its own house?		
YES	10	5	10
NO	0	1	0
Item 20	Are any practical problems experienced by the mother due to father absence?		
YES	5	5	
NO	5	1	
Item 21	Are any emotional problems experienced by the mother due to father absence?		
YES	4	4	
NO	6	2	

Appendix 3.3.19

Responses made by mothers of working class children experiencing intermittent, permanent or no father absence to individual items of the Biographical and Environmental Questionnaire

	Intermittent Absence Group N = 10	Permanent Absence Group N = 8	No Absence Group N = 10
Item 10	How many schools has the child attended?		More than one?
YES	6	5	4
NO	4	3	6
Item 11	Is the child happy at school?		
YES	10	4	9
NO	0	4	1
Item 13a	Does mother read with the child?		
YES	10	8	10
NO	0	0	0
Item 13b	Does father read with the child?		
YES	7		6
NO	3		4
Item 14a	Does mother take child on outings?		
YES	10	8	9
NO	0	0	1
Item 14b	Does father take the child on outings?		
YES	10	9	
NO	0	1	

Appendix 3.3.19 (cont.)

	Intermittent Absence Group N = 10	Permanent Absence Group N = 8	No Absence Group N = 10
Item 15	Does the father take a big part in managing the child?		
YES	7		7
NO	3		3
Item 18	Has mother been in paid work since the birth of the child?		
YES	2	4	9
NO	8	4	1
Item 19	Does the family own its own house?		
YES	5	3	7
NO	5	5	3
Item 20	Are any practical problems experienced by the mother due to father absence?		
YES	1	7	
NO	9	1	
Item 21	Are any emotional problems experienced by the mother due to father absence?		
YES	5	4	
NO	5	4	

APPENDIX 4

THE RESULTS OF THE ANALYSES OF VARIANCE PERFORMED ON DATA OBTAINED FROM THE FIRST AND SECOND STUDIES

4.1 The First Study

4.2 The Second Study: Children aged between 5 and 7 years

4.3 The Second Study: Children aged between 8 and 11 years

4.1 The First Study

Appendix 4.1.1

Results of the four way analysis of variance performed on IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	190.29	1	190.29	< 1
Social Class (B)	2811.94	1	2811.94	6.34**
Type of Father Absence (C)	471.91	2	235.96	< 1
IQ Score (D)	656.66	2	328.33	10.12***
A x B	36.36	1	36.36	< 1
A x C	578.61	2	289.31	< 1
A x D	50.84	2	25.42	< 1
B x C	114.05	2	57.02	< 1
B x D	282.23	2	141.12	4.35**
C x D	200.84	4	50.21	1.55
A x B x C	164.12	2	82.06	< 1
A x B x D	53.61	2	26.81	< 1
A x C x D	56.48	4	14.12	< 1
B x C x D	42.05	4	10.51	< 1
A x B x C x D	182.72	4	45.68	1.41
Subjects within groups	18189.65	41	443.65	
Subjects within groups x D	2660.90	82	32.45	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.1.2

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on each of the five verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	8.39	1	8.39	< 1
Social Class (B)	223.48	1	223.48	10.53***
Type of Father Absence (C)	4.96	2	2.48	< 1
Sub-test Score (D)	329.83	4	82.46	13.63***
A x B	5.26	1	5.26	< 1
A x C	22.51	2	11.25	< 1
A x D	10.77	4	2.69	< 1
B x C	7.87	2	3.94	< 1
B x D	54.64	4	3.91	< 1
C x D	54.40	8	6.80	1.12
A x B x C	1.00	2	0.50	< 1
A x B x D	33.42	4	8.35	1.38
A x C x D	31.94	8	3.99	< 1
B x C x D	36.08	8	4.51	< 1
A x B x C x D	25.17	8	3.15	< 1
Subjects within groups	870.52	41	21.23	
Subjects within groups x D	992.18	164	6.05	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.1.3

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	1.30	1	1.30	< 1
Social Class (B)	20.18	1	20.18	1.17
Type of Father Absence (C)	63.91	2	31.96	1.85
Sub-test Score (D)	106.20	4	26.55	4.78***
A x B	0.12	1	0.12	< 1
A x C	35.28	2	17.64	1.02
A x D	29.56	4	7.39	1.33
B x C	8.44	2	4.22	< 1
B x D	14.40	4	3.60	< 1
C x D	85.31	8	10.66	1.92
A x B x C	44.47	2	22.24	1.29
A x B x D	30.74	4	7.69	1.38
A x C x D	61.64	8	7.71	1.39
B x C x D	16.09	8	8.05	1.45
A x B x C x D	78.72	8	9.84	1.77
Subjects within groups	708.79	41	17.29	
Subjects within groups x D	910.79	164	5.55	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.1.4

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	0.24	1	0.24	< 1
Social Class (B)	136.69	1	136.69	5.24*
Type of Father Absence (C)	39.06	2	19.53	< 1
A x B	24.42	1	24.42	< 1
A x C	17.40	2	8.70	< 1
B x C	43.39	2	21.70	< 1
A x B x C	177.31	2	88.65	3.40*
Subjects within groups	1070.62	41	26.11	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.1.5

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	11.52	1	11.52	0.74
Social Class (B)	68.37	1	68.37	4.37*
Type of Father Absence (C)	113.16	2	56.58	3.62*
A x B	1.24	1	1.24	< 1
A x C	48.46	2	24.23	1.55
B x C	34.08	2	17.04	1.09
A x B x C	101.75	2	50.88	3.25*
Subjects within groups	641.62	41	15.65	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

4.2 The Second Study: Children aged between 5 and 7 years

Appendix 4.2.1

Results of the four way analysis of variance performed on IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	10.05	1	10.05	< 1
Social Class (B)	8422.73	1	8422.73	21.12***
Type of Father Absence (C)	494.91	2	247.46	< 1
IQ Score (D)	1198.54	2	599.27	15.22***
A x B	888.23	1	888.23	2.23
A x C	706.68	2	353.34	< 1
A x D	16.10	2	8.05	< 1
B x C	7.94	2	3.97	< 1
B x D	961.70	2	480.85	12.21***
C x D	223.86	4	55.97	1.42
A x B x C	188.24	2	94.12	< 1
A x B x D	71.38	2	35.69	< 1
A x C x D	561.07	4	140.27	3.56**
B x C x D	135.37	4	33.84	< 1
A x B x C x D	101.03	4	25.26	< 1
Subjects within groups	15953.74	40	398.84	
Subjects within groups x D	3149.86	80	39.37	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.2

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on each of the five verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	0.04	1	0.04	< 1
Social Class (B)	576.89	1	576.89	24.68***
Type of Father Absence (C)	49.99	2	24.99	1.07
Sub-test Score (D)	72.27	4	18.11	3.28**
A x B	29.60	1	29.60	1.27
A x C	66.76	2	33.38	1.43
A x D	60.85	4	15.21	2.75*
B x C	1.26	2	0.63	< 1
B x D	63.18	4	15.80	2.86**
C x D	161.39	8	20.17	3.65***
A x B x C	4.61	2	2.31	< 1
A x B x D	37.56	4	9.39	1.70
A x C x D	67.66	8	8.46	1.53
B x C x D	60.39	8	7.55	1.37
A x B x C x D	52.13	8	6.52	1.18
Subjects within groups	934.85	40	23.37	
Subjects within groups x D	884.62	160	5.53	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.3

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	0.07	1	0.07	< 1
Social Class (B)	85.56	1	85.56	6.16**
Type of Father Absence (C)	20.32	2	10.16	< 1
Sub-test Score (D)	43.00	4	10.75	1.69
A x B	51.46	1	51.46	3.71
A x C	15.59	2	7.80	< 1
A x D	19.52	4	4.88	< 1
B x C	4.73	2	2.37	< 1
B x D	17.65	4	4.41	< 1
C x D	49.98	8	6.25	1.04
A x B x C	19.49	2	9.74	< 1
A x B x D	19.86	4	4.97	< 1
A x C x D	23.86	8	2.98	< 1
B x C x D	49.68	8	6.21	1.03
A x B x C x D	6.35	8	0.79	< 1
Subjects within groups	555.44	40	13.89	
Subjects within groups x D	961.58	160	6.01	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.4

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	0.70	1	0.70	< 1
Social Class (B)	4.31	1	4.31	< 1
Type of Father Absence (C)	38.19	2	19.09	< 1
A x B	117.46	1	117.46	4.21**
A x C	15.31	2	7.65	< 1
B x C	78.60	2	39.30	1.41
A x B x C	12.82	2	6.41	< 1
Subjects within groups	1116.08	40	27.90	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.5

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	76.07	1	76.07	4.93**
Social Class (B)	37.97	1	37.97	2.46
Type of Father Absence (C)	14.25	2	7.12	< 1
A x B	1.44	1	1.44	< 1
A x C	42.85	2	21.42	1.39
B x C	79.65	2	39.83	2.58
A x B x C	23.59	2	11.80	< 1
Subjects within groups	617.67	40	15.44	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.6

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	1.49	1	1.49	< 1
Social Class (B)	13.99	1	13.99	5.25*
Type of Father Absence (C)	2.81	2	1.41	< 1
A x B	1.64	1	1.64	< 1
A x C	8.51	2	2.26	< 1
B x C	0.48	2		< 1
A x B x C	32.39	2	16.19	6.08**
Subjects within groups	106.57	40	2.66	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.7

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule E of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	6.66	1	6.66	4.22*
Social Class (B)	0.30	1	0.30	< 1
Type of Father Absence (C)	0.83	2	0.42	< 1
A x B	3.51	1	3.51	2.22
A x C	0.50	2	0.25	< 1
B x C	2.31	2	1.16	< 1
A x B x C	3.66	2	1.83	1.16
Subjects within groups	63.17	40	1.58	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.2.8

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	21.50	1	21.50	3.69
Social Class (B)	54.94	1	54.94	9.42***
Type of Father Absence (C)	10.90	2	5.45	0.94
A x B	3.04	1	3.04	< 1
A x C	42.94	2	21.47	3.68*
B x C	24.44	2	12.22	2.10
A x B x C	10.36	2	5.18	< 1
Subjects within groups	233.25	40	5.83	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

4.3 The Second Study: Children aged between 8 and 11 years

Appendix 4.3.1

Results of the four way analysis of variance performed on IQ scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	233.22	1	233.22	< 1
Social Class (B)	169.39	1	169.39	< 1
Type of Father Absence (C)	78.01	2	39.01	< 1
IQ Score (D)	212.21	2	106.11	2.81
A x B	1489.70	1	1489.70	4.12
A x C	908.16	2	454.08	1.26
A x D	4.71	2	2.35	< 1
B x C	134.23	2	6.72	< 1
B x D	930.93	2	465.46	12.30***
C x D	386.34	4	96.59	2.55
A x B x C	3068.97	2	1534.49	4.25**
A x B x D	9.03	2	4.52	< 1
A x C x D	28.19	4	7.05	< 1
B x C x D	497.09	4	124.27	3.29**
A x B x C x D	156.42	4	39.11	1.03
Subjects within groups	15179.20	42	361.41	
Subjects within groups x D	3178.00	84	37.83	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.2

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on each of the five verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	3.43	1	3.43	< 1
Social Class (B)	87.16	1	87.16	5.03*
Type of Father Absence (C)	11.86	2	5.93	< 1
Sub-test Score (D)	267.85	4	66.96	18.04***
A x B	39.82	1	39.82	2.30
A x C	23.96	2	11.98	< 1
A x D	17.33	4	4.33	1.17
B x C	9.67	2	4.84	< 1
B x D	40.55	4	10.14	2.88*
C x D	46.15	8	5.77	1.56
A x B x C	114.77	2	57.48	3.31*
A x B x D	9.18	4	2.30	< 1
A x C x D	74.94	8	9.37	2.52**
B x C x D	20.01	8	2.50	< 1
A x B x C x D	32.66	8	4.08	1.10
Subjects within groups	728.43	42	17.34	
Subjects within groups x D	623.44	168	3.71	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.3

Results of the four way analysis of variance performed on scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence, on each of the five performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F
Sex (A)	12.67	1	12.67	< 1
Social Class (B)	26.00	1	26.00	1.34
Type of Father Absence (C)	30.98	2	15.49	< 1
Sub-test Score (D)	19.24	4	4.81	< 1
A x B	54.97	1	54.97	2.83
A x C	37.78	2	18.89	< 1
A x D	54.24	4	13.56	2.56*
B x C	33.09	2	16.55	< 1
B x D	4.62	4	1.16	< 1
C x D	66.99	8	8.37	1.58
A x B x C	169.26	2	84.63	4.36**
A x B x D	17.31	4	4.33	< 1
A x C x D	38.52	8	4.82	< 1
B x C x D	68.96	8	8.62	1.63
A x B x C x D	76.76	8	9.60	1.81
Subjects within groups	815.81	42	19.42	
Subjects within groups x D	888.99	168	5.29	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.4

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	25.60	1	25.60	< 1
Social Class (B)	2.41	1	2.41	< 1
Type of Father Absence (C)	182.31	2	91.15	3.50*
A x B	27.48	1	27.48	1.06
A x C	41.68	2	20.84	< 1
B x C	27.71	2	13.86	< 1
A x B x C	1.26	2	0.63	< 1
Subjects within groups	1092.80	42	26.02	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.5

Results of the three way analysis of variance performed on total scores obtained by middle class and working class male and female children experiencing intermittent, permanent or no father absence on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F
Sex (A)	26.00	1	26.00	2.12
Social Class (B)	40.64	1	40.64	3.14
Type of Father Absence (C)	176.69	2	88.35	7.21***
A x B	24.41	1	24.41	1.99
A x C	5.93	2	2.96	< 1
B x C	56.16	2	28.08	2.29
A x B x C	142.69	2	71.34	5.83***
Subjects within groups	514.40	42	12.25	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.6

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	14.94	1	14.94	8.73***
Social Class (B)	0.84	1	0.84	< 1
Type of Father Absence (C)	5.47	2	2.74	1.60
A x B	6.71	1	6.71	3.92
A x C	6.96	2	3.48	1.74
B x C	3.17	2	1.58	< 1
A x B x C	8.16	2	4.08	2.04
Subjects within groups	71.87	42	1.71	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.7

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule E of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	0.04	1	0.04	< 1
Social Class (B)	0.47	1	0.47	< 1
Type of Father Absence (C)	7.08	2	3.54	1.89
A x B	7.12	1	7.12	3.81
A x C	7.26	2	3.63	1.94
B x C	0.65	2	0.33	< 1
A x B x C	0.21	2	0.11	< 1
Subjects within groups	78.67	42	1.87	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

Appendix 4.3.8

Results of the three way analysis of variance performed on scores obtained by mothers of middle class and working class male and female children experiencing intermittent, permanent or no father absence on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F
Sex (A)	3.36	1	3.36	< 1
Social Class (B)	29.37	1	29.37	5.45**
Type of Father Absence (C)	3.89	2	1.95	< 1
A x B	10.68	1	10.68	1.98
A x C	3.49	2	1.75	< 1
B x C	14.40	2	7.20	1.34
A x B x C	6.69	2	3.35	< 1
Subjects within groups	226.27	42	5.39	

* $p < 0.05$ ** $p < 0.025$ *** $p < 0.01$

APPENDIX 5

THE RESULTS OF THE SUPPLEMENTARY ANALYSES OF SIMPLE MAIN EFFECTS

5.1 The Second Study: The Investigation of Cognitive Development

5.2 The Second Study: The Investigation of Emotional and Behavioural Problems

5.3 The Second Study: The Investigation of Mother-child Interaction

5.1 The Second Study: The Investigation of Cognitive Development

Appendix 5.1.1

The results of the analysis of simple main effects of social class on the IQ scores obtained by children aged between five and seven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Full Scale IQ	3301.15	1	3301.15	21.56	.01
Subjects within groups x Full Scale IQ	6124.45	40	153.11		
Social Class, Verbal Scale IQ	5232.12	1	5232.12	28.82	.01
Subjects within groups x Verbal Scale IQ	7442.47	40	181.52		
Social Class, Performance Scale IQ	850.93	1	850.93	6.15	.025
Subjects within groups x Performance Scale IQ	5536.68	40	138.42		

Appendix 5.1.2

The results of the analysis of simple main effects of sex of child on the IQ scores obtained by children aged between five and seven years experiencing different types of father absence on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Intermittent Absence, Full Scale IQ	28.30	1	28.30	< 1	n.s.
Sex, Permanent Absence, Full Scale IQ	202.78	1	202.78	1.32	n.s.
Sex, No Absence, Full Scale IQ	40.23	1	40.23	< 1	n.s.
Subjects within groups x Full Scale IQ	6124.45	40	153.11		
Sex, Intermittent Absence, Verbal Scale IQ	2.68	1	2.68	< 1	n.s.
Sex, Permanent Absence, Verbal Scale IQ	572.04	1	572.04	3.15	n.s.
Sex, No Absence, Verbal Scale IQ	297.12	1	297.12	1.64	n.s.
Subjects within groups x Verbal Scale IQ	7442.47	40	181.52		
Sex, Intermittent Absence, Performance Scale IQ	104.65	1	104.65	< 1	n.s.
Sex, Permanent Absence, Performance Scale IQ	6.54	1	6.54	< 1	n.s.
Sex, No Absence, Performance Scale IQ	39.58	1	39.58	< 1	n.s.
Subjects within groups x Performance Scale IQ	5536.68	40	138.42		

Appendix 5.1.3

The results of the analysis of simple main effects of IQ scale on scores obtained by children aged between five and seven years on the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
IQ Scale, Male, Intermittent Absence	811.92	2	405.96	12.83	.01
Subjects within groups x IQ Scale	706.40	16	44.15	9.20	
IQ Scale, Male, Permanent Absence	371.44	2	185.72	2.48	n.s.
Subjects within groups x IQ Scale	898.31	12	74.86		
IQ Scale, Male, No Absence	9.13	2	4.56	< 1	n.s.
Subjects within groups x IQ Scale	384.30	14	27.45		
IQ Scale, Females, Intermittent Absence	274.98	2	137.49	2.64	n.s.
Subjects within groups x IQ Scale	833.73	16	52.11		
IQ Scale, Females, Permanent Absence	10.34	2	5.17	< 1	n.s.
Subjects within groups x IQ Scale	131.28	10	13.13		
IQ Scale, Females, No Absence	521.78	2	260.89	16.02	.01
Subjects within groups x IQ Scale	195.50	12	16.29		

Appendix 5.1.4

The results of the analysis of simple main effects of social class on the scores obtained by children aged between five and seven years on the individual verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, General Information	269.84	1	269.84	42.03	.01
Subjects within groups x General Information	256.97	40	6.42		
Social Class, Comprehension	136.99	1	136.99	8.62	.01
Subjects within groups x Comprehension	636.12	40	15.90		
Social Class, Arithmetic	136.52	1	136.52	23.62	.01
Subjects within groups x Arithmetic	231.22	40	5.78		
Social Class, Similarities	48.57	1	48.57	6.61	.025
Subjects within groups x Similarities	293.80	40	7.35		
Social Class, Vocabulary	47.75	1	47.75	4.76	.05
Subjects within groups x Vocabulary	401.37	40	10.03		

Appendix 5.1.5

The results of the analysis of simple main effects of sex of child on the scores obtained by children aged between five and seven years on the individual verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, General Information	3.00	1	3.00	< 1	n.s.
Subjects within groups x General Information	256.97	40	6.42		
Sex, Comprehension	0.21	1	0.21	< 1	n.s.
Subjects within groups x Comprehension	636.12	40	15.90		
Sex, Arithmetic	19.01	1	19.01	3.29	n.s.
Subjects within groups x Arithmetic	231.22	40	5.78		
Sex, Similarities	0.69	1	0.69	< 1	n.s.
Subjects within groups x Similarities	293.80	40	7.35		
Sex, Vocabulary	37.98	1	37.98	3.79	n.s.
Subjects within groups x Vocabulary	401.37	40	10.03		

Appendix 5.1.6

The results of the analysis of simple main effects of sex of child on scores obtained by children aged between eight and eleven years over all three IQ scales of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Middle Class Intermittent Absence	57.86	1	57.86	< 1	n.s.
Sex, Middle Class Permanent Absence	257.87	1	257.87	< 1	n.s.
Sex, Middle Class No Absence	404.63	1	404.63	1.12	n.s.
Sex, Working Class Intermittent Absence	513.06	1	513.06	1.42	n.s.
Sex, Working Class Permanent Absence	3688.72	1	3688.72	10.21	.01
Sex, Working Class No Absence	777.91	1	777.91	2.16	n.s.
Subjects within groups	15179.20	42	361.41		

Appendix 5.1.7

The results of the analysis of simple main effects of social class on scores obtained by children aged between eight and eleven years over all three IQ scales of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Males Intermittent Absence	211.33	1	211.33	< 1	n.s.
Social Class, Males Permanent Absence	1079.09	1	1079.09	2.99	n.s.
Social Class, Males No Absence	169.41	1	169.41	< 1	n.s.
Social Class, Females Intermittent Absence	247.13	1	247.13	< 1	n.s.
Social Class, Females Permanent Absence	1930.81	1	1930.81	5.34	.025
Social Class, Females No Absence	1224.34	1	1224.34	3.39	n.s.
Subjects within groups	15179.20	42	361.41		

Appendix 5.1.8

The results of the analysis of simple main effects of IQ scale on scores obtained by children aged between eight and eleven years on the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
IQ Scale, Middle Class, Intermittent Absence	678.62	2	339.31	7.08	.01
Subjects within groups x IQ Scale	776.06	16	47.94		
IQ Scale, Middle Class, Permanent Absence	126.00	2	63.00	2.18	n.s.
Subjects within groups x IQ Scale	230.89	8	28.86		
IQ Scale, Middle Class, No Absence	53.55	2	26.77	< 1	n.s.
Subjects within groups x IQ Scale	804.40	16	50.53		
IQ Scale, Working Class, Intermittent Absence	610.15	2	305.08	5.41	.025
Subjects within groups x IQ Scale	563.60	16	56.36		
IQ Scale, Working Class, Permanent Absence	513.85	2	256.92	11.40	.01
Subjects within groups x IQ Scale	270.31	12	22.53		
IQ Scale, Working Class No Absence	44.40	2	22.20	< 1	n.s.
Subjects within groups x IQ Scale	537.73	16	33.61		

Appendix 5.1.9

Results of the analysis of simple main effects of social class on the IQ scores obtained by children aged between eight and eleven years on the Full Scale, Verbal Scale and Performance Scale of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Intermittent Absence, Full Scale IQ	0.04	1	0.04	< 1	n.s.
Social Class, Permanent Absence, Full Scale IQ	9.64	1	9.64	< 1	n.s.
Social Class, No Absence Full Scale IQ	94.68	1	94.68	< 1	n.s.
Subjects within groups x Full Scale IQ	5764.13	42	137.24		
Social Class, Intermittent Absence, Verbal Scale IQ	596.78	1	596.78	4.75	.05
Social Class, Permanent Absence, Verbal Scale IQ	117.23	1	117.23	< 1	n.s.
Social Class No Absence, Verbal Scale IQ	228.40	1	228.40	1.82	n.s.
Subjects within groups x Verbal Scale IQ	5276.53	42	125.63		
Social Class, Intermittent Absence, Performance Scale IQ	680.45	1	680.45	3.91	n.s.
Social Class, Permanent Absence, Performance Scale IQ	0.12	1	0.12	< 1	n.s.
Social Class, No Absence, Performance Scale IQ	4.29	1	4.29	< 1	n.s.
Subjects within groups x Performan Scale IQ	7316.53	42	174.20		

Appendix 5.1.10

The results of the analysis of simple main effects of social class on scores obtained by children aged between eight and eleven years over all five verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Males, Intermittent Absence	81.62	1	81.62	4.71	.05
Social Class, Males, Permanent Absence	8.80	1	8.80	< 1	n.s.
Social Class, Males, No Absence	5.54	1	5.54	< 1	n.s.
Social Class, Females, Intermittent Absence	3.36	1	3.36	< 1	n.s.
Social Class, Females, Permanent Absence	58.37	1	58.37	3.37	n.s.
Social Class, Females No Absence	93.88	1	93.88	5.41	.05
Subjects within groups	728.43	42	17.34		

Appendix 5.1.11

The results of the analysis of simple main effects of sex of child on scores obtained by children aged between eight and eleven years over all five verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Middle Class, Intermittent Absence	3.34	1	3.34	< 1	n.s.
Sex, Middle Class, Permanent Absence	4.78	1	4.78	< 1	n.s.
Sex, Middle Class, No Absence	26.08	1	26.08	1.50	n.s.
Sex, Working Class, Intermittent Absence	28.82	1	28.82	1.66	n.s.
Sex, Working Class, Permanent Absence	70.99	1	70.99	4.09	.05
Sex, Working Class, No Absence	48.16	1	48.16	2.78	n.s.
Subjects within Groups	728.43	42	17.34		

Appendix 5.1.12

The analysis of simple main effects of social class on scores obtained by children aged between eight and eleven years on the individual verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, General Information	0.31	1	0.31	1	n.s.
Subjects within groups x General Information	280.00	42	6.67		
Social Class, Comprehension	56.70	1	56.70	9.91	.01
Subjects within groups x Comprehension	240.13	42	5.72		
Social Class, Arithmetic	21.34	1	21.34	3.16	n.s.
Subjects within groups x Arithmetic	283.47	42	6.75		
Social Class, Similarities	41.10	1	41.10	5.56	.025
Subjects within groups x Similarities	310.27	42	7.39		
Social Class, Vocabulary	8.23	1	8.23	1.68	n.s.
Subjects within groups x Vocabulary	206.00	42	4.90		

Appendix 5.1.13

The results of the analysis of simple main effects of sex of child on scores obtained by children aged between eight and eleven years on the individual verbal sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Intermittent Absence, General Information	0.39	1	0.39	< 1	n.s.
Sex, Permanent Absence, General Information	0.12	1	0.12	< 1	n.s.
Sex, No Absence, General Information	0.17	1	0.17	< 1	n.s.
Subjects within groups x General Information	280.14	42	6.67		
Sex, Intermittent Absence, Comprehension	43.89	1	43.89	7.67	.01
Sex, Permanent Absence, Comprehension	17.14	1	17.14	3.00	n.s.
Sex, No Absence, Comprehension	5.19	1	5.19	< 1	n.s.
Subjects within groups x Comprehension	240.24	42	5.72		
Sex, Intermittent Absence, Arithmetic	1.07	1	1.07	< 1	n.s.
Sex, Permanent Absence, Arithmetic	37.68	1	37.68	5.58	.05
Sex, No Absence, Arithmetic	1.54	1	1.54	< 1	n.s.
Subjects within groups x Arithmetic	283.50	42	6.75		

Appendix 5.1.13 (cont.)

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Intermittent Absence, Similarities	1.07	1	1.07	< 1	n.s.
Sex, Permanent Absence, Similarities	3.99	1	3.99	< 1	n.s.
Sex, No Absence, Similarities	0.39	1	0.39	< 1	n.s.
Subjects within groups x Similarities	310.38	42	7.39		
Sex, Intermittent Absence, Vocabulary	2.74	1	2.74	< 1	n.s.
Sex, Permanent Absence, Vocabulary	1.54	1	1.54	< 1	n.s.
Sex, No Absence, Vocabulary	2.74	1	2.74	< 1	n.s.
Subjects within groups x Vocabulary	205.80	42	4.90		

Appendix 5.1.14

The results of the analysis of simple main effects of social class on scores obtained by children aged between eight and eleven years over all five performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Males, Intermittent Absence	2.90	1	2.90	< 1	n.s.
Social Class, Males, Permanent Absence	118.25	1	118.25	6.09	.025
Social Class, Males, No Absence	7.56	1	7.56	< 1	n.s.
Social Class, Females, Intermittent Absence	76.96	1	76.96	3.96	n.s.
Social Class, Females, Permanent Absence	65.16	1	65.16	3.36	n.s.
Social Class, Females, No Absence	12.50	1	12.50	< 1	n.s.
Subjects within groups	815.81	42	19.42		

Appendix 5.1.15

The results of the analysis of simple main effects of sex of child on scores obtained by children aged between eight and eleven years over all five performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Middle Class, Intermittent Absence	6.19	1	6.19	< 1	n.s.
Sex, Middle Class, Permanent Absence	21.04	1	21.04	1.08	n.s.
Sex, Middle Class, No Absence	6.86	1	6.86	< 1	n.s.
Sex, Working Class, Intermittent Absence	21.00	1	21.00	1.08	n.s.
Sex, Working Class, Permanent Absence	206.12	1	206.12	10.61	.01
Sex, Working Class, No Absence	13.44	1	13.44	< 1	n.s.
Subjects within groups	815.81	42	19.42		

Appendix 5.1.16

The results of the analysis of simple main effects of sex of child on scores obtained by children aged between eight and eleven years on the individual performance sub-tests of the WISC

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Picture Completion	8.72	1	8.72	1.41	n.s.
Subjects within groups x Picture Completion	260.53	42	6.20		
Sex, Picture Arrangement	21.34	1	21.34	2.28	n.s.
Subjects within groups x Picture Arrangement	393.73	42	9.37		
Sex, Block Design	6.48	1	6.48	< 1	n.s.
Subjects within groups x Block Design	396.53	42	9.44		
Sex, Object Assembly	7.10	1	7.10	1.41	n.s.
Subjects within groups x Object Assembly	212.13	42	5.05		
Sex, Coding	23.26	1	23.26	1.86	n.s.
Subjects within groups x Coding	525.20	42	12.50		

5.2 The Second Study: The Investigation of Emotional and Behavioural Problems

Appendix 5.2.1

The results of the analysis of simple main effects of social class on total scores obtained by children aged between five and seven years on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class, Males	38.39	1	38.39	1.38	n.s.
Social Class, Females	83.39	1	83.39	2.98	n.s.
Subjects within groups	1116.08	40	27.90		

Appendix 5.2.2

The results of the analysis of simple main effects of sex of child on total scores obtained by children aged between five and seven years on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Middle Class	61.65	1	61.65	2.21	n.s.
Sex, Working Class	55.89	1	55.89	2.00	n.s.
Subjects within groups	1116.08	40	27.90		

5.3 The Second Study: The Investigation of Mother-Child Interaction

Appendix 5.3.1

The results of the analysis of simple main effects of social class on the scores of mothers of children aged between five and seven years on Schedule D of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Social Class x Intermittent Absence, Males	2.09	1	2.09	< 1	n.s.
Social Class x Intermittent Absence, Females	2.09	1	2.09	< 1	n.s.
Social Class x Permanent Absence, Males	30.22	1	30.22	11.36	.01
Social Class x Permanent Absence, Females	2.85	1	2.85	1.07	n.s.
Social Class x No Absence, Males	0.63	1	0.63	< 1	n.s.
Social Class x No Absence, Females	10.59	1	10.59	3.98	n.s.
Subjects within groups	106.57	40	2.66		

Appendix 5.3.2

The results of the analysis of simple main effects of sex of child on the scores of mothers of children aged between five and seven years on Schedule F of the Index of Communication and Control

Source	S.S.	d.f.	M.S.	F	Significance level
Sex, Intermittent Absence	60.44	1	60.44	10.17	.01
Sex, Permanent Absence	1.63	1	1.63	< 1	n.s.
Sex, No Absence	2.35	1	2.35	< 1	n.s.
Subjects within groups	233.24	40	5.83		

APPENDIX 6

THE INCIDENCE OF PSYCHIATRIC DISORDER IN ALL CHILDREN STUDIED

Appendix 6.1.1

The incidence of psychiatric disorder in all subjects studied as assessed by the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Father Absence Group		Males		Females		Total over each absence group
		Middle Class	Working Class	Middle Class	Working Class	
INTERMITTENT	Incidence within Sub-group	3	3	3	6	15
	Total Subjects in Sub-group	14	15	16	15	60
	Percentage Incidence	21.43%	20%	18.75%	40%	25%
	Anti-social Disorder	2	2	2	2	8
	Neurotic Disorder	0	1	1	4	6
	Mixed Disorder	1	0	0	0	1
PERMANENT	Incidence within Sub-group	6	7	1	5	19
	Total Subjects in Sub-group	8	16	9	11	44
	Percentage Incidence	75%	43.75%	11.11%	45.45%	43.18%
	Anti-social Disorder	3	3	0	3	9
	Neurotic Disorder	3	3	1	1	8
	Mixed Disorder	0	1	0	1	2
NO	Incidence within Sub-group	2	2	0	1	5
	Total Subjects in Sub-group	15	14	13	13	55
	Percentage Incidence	13.33%	14.29%	0.0%	0.0%	9.09%
	Anti-social Disorder	0	1	0	0	1
	Neurotic Disorder	2	1	0	1	4
	Mixed Disorder	0	0	0	0	0

Appendix 6.1.2

The incidence of psychiatric disorder in all subjects studied as assessed by the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

Father Absence Group		Males		Females		Total over each absence group
		Middle Class	Working Class	Middle Class	Working Class	
INTERMITTENT	Incidence within Sub-group	3	3	1	2	9
	Total Subjects in Sub-group	14	15	16	15	60
	Percentage Incidence	21.43%	20%	6.25%	13.33%	15%
	Anti-social Disorder	0	1	0	1	2
	Neurotic Disorder	3	2	1	1	7
	Mixed Disorder	0	0	0	0	0
PERMANENT	Incidence within Sub-group	4	5	1	3	13
	Total Subjects in Sub-group	8	16	9	11	44
	Percentage Incidence	50%	31.25%	11.11%	27.27%	29.56%
	Anti-social Disorder	1	1	0	2	4
	Neurotic Disorder	3	3	1	0	7
	Mixed Disorder	0	1	0	1	2
NO	Incidence within Sub-group	1	3	0	0	4
	Total Subjects in Sub-group	15	14	13	13	55
	Percentage Incidence	6.67%	21.43%	0.0%	0.0%	7.27%
	Anti-social Disorder	0	1	0	0	1
	Neurotic Disorder	0	1	0	0	1
	Mixed Disorder	1	1	0	0	2

Appendix 7

An investigation of the incidence of emotional and behavioural problems in all children studied

a) Examination of the Children's Behaviour Questionnaire for completion by Parents: Scale A(2)

1) Total Scores Total scores obtained by the children may be found in appendices 3.1.4., 3.2.4. and 3.3.4. A summary of these scores showing the means and standard deviations obtained by each type of father absence - social class - sex of child sub-group may be found in Appendix 7.1.1. A three way analysis of variance was carried out on the scores and the results of the analysis may be found in Appendix 7.1.2.

Overall there was no effect due to father absence ($F=2.96$, $df=2, 147$ $p>.05$) and no other significant main effects were found.

A significant interaction between social class and sex of child was obtained ($F=4.98$ $df=1, 147$ $p<.05$). An examination of the scores indicated that middle class boys obtained higher scores than did middle class girls whilst in the working class group the reverse was the case, girls obtaining higher scores than boys.

The number of children who obtained total scores of 13 or more, the score considered to indicate the likely presence of psychiatric disorder (Rutter, Tizard & Whitmore, 1970), was calculated for each of the three absence groups, intermittent, permanent and no absence. The number of children in each absence group obtaining such a score may be found in Appendix 6.1.1. A Chi-squared test was carried out on the data and a significant result was obtained ($X^2=15.37$ $d.f.=2$ $p<.01$). An examination of data shown in table 6.1.1. indicated that

Appendix 7.1.1.

Means and standard deviations of scores obtained by all children on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	9.36	12.13	8.8
		Standard Deviation	4.73	4.61	6.17
		Number of Subjects	14	8	15
	Working Class	Mean	8.07	10.88	8.71
		Standard Deviation	4.53	6.26	4.34
		Number of Subjects	15	16	14
FEMALES	Middle Class	Mean	7.38	7.44	7.62
		Standard Deviation	5.04	6.27	3.12
		Number of Subjects	16	9	13
	Working Class	Mean	10.93	12.64	7.92
		Standard Deviation	4.65	6.98	3.23
		Number of Subjects	15	11	13
Total for all subjects in each absence group		Mean	8.90	10.84	8.29
		Standard Deviation	4.93	6.27	4.37
		Number of Subjects	60	44	55

Appendix 7.2.

Results of the three way analysis of variance performed on total scores obtained by all children studied on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2)

Source	S.S.	d.f.	M.S.	F	Significance levels
Sex (a)	15.37	1	15.37	< 1	n.s.
Social Class (B)	39.13	1	39.13	1.51	n.s.
Type of Father Absence (C)	153.75	2	76.88	2.96	n.s.
A x B	129.32	1	129.32	4.98	.05
A x C	22.30	2	11.15	< 1	n.s.
B x C	19.92	2	9.96	< 1	n.s.
A x B x C	55.88	2	6.76	< 1	n.s.
Subjects within groups	3819.47	147	25.98		

highest incidence of disorder was found in the permanent absence group.

(ii) Neuroticism and Anti-Social Behaviour Sub Scales: Neuroticism and anti-social behaviour sub-scale scores were obtained for each child as described on page 117. An examination of the neurotic and anti-social behaviour sub-scale scores was carried out for children who obtained a total score of 13 or more. Rutter, Tizard and Whitmore (1970) used these sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or anti-social disorder according to which sub-scale score was the higher. Such a classification was carried out on children obtaining scores of 13 or more in this study and the results may be found in Appendix 6.1.1.

Two Fisher Exact Probability tests were carried out on the data, one between the intermittent and no absence groups and the other between the permanent and no absence groups. No significant results were obtained ($p > .05$). That is father absence had no significant effect on the relative incidence of neurotic and anti-social disorder.

The results of the analysis of total scores obtained by all children on the Children's Behaviour Questionnaire for Completion by Parents: Scale A(2) indicated that father absence had no effect on total scores. In the separate analysis only in the case of children aged between 8 and 11 years was absence of the father found to have a marked effect on total scores. The results of the overall analysis indicated that this effect was not sufficiently great to remain when the scores of all children were examined together.

The results of the analysis of total scores obtained by all children on the Children's Behaviour Questionnaire for Completion by

Teachers: Scale B(2) revealed that father absence did affect total scores. Children experiencing permanent father absence obtained higher total scores than did children whose fathers were intermittently or never absent. Thus, in the case of teachers' reports, results obtained from separate samples indicating that permanent father absence was associated with a higher incidence of emotional and behavioural problems, were confirmed by the overall analysis.

The examination of the incidence of psychiatric disorder confirmed trends reported in the main thesis. Both in the case of teachers and parents reports, the incidence of psychatric disorder was highest in those children experiencing permanent father absence and lowest amongst children whose fathers were not absent.

Finally, as was reported in the main thesis father absence did not affect significantly the relative incidence of neurotic and anti-social disorder in the children studied.

(b) Examination of the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

(i) Total Scores: Total scores obtained by the children may be found in Appendices 3.1.9., 3.2.9. and 3.3.9. A summary of these scores showing the means and standard deviations obtained by each type of father absence - social class - sex of child sub group may be found in Appendix 7.1.3. A three way analysis of variance was carried out on the scores and the results of the analysis may be found in Appendix 7.1.4.

A significant main effect due to type of father absence was found (F = 6.4.5, d.f. = 2-147, p.01) Paired comparisons of the means obtained by the three absence groups were carried out. The difference between the scores obtained by the permanent absence groups and the no absence and intermittent absence groups combined was significant (F = 12.88, d.f. 1,147, $p < .01$). The difference between the inter-

mittent and no absence groups was not significant ($F = <1$, d.f. 1,147, $p < .01$). Therefore children whose fathers were permanently absent obtained higher scores than did children in the other two groups.

A significant main effect due to sex of child was also found ($F = 5.52$, d.f. 1,147, $p < .05$). An examination of scores indicated that males obtained higher scores than did females.

The number of children who obtained total scores of 9 or more, the score considered to indicate the likely presence of psychiatric disorder (Rutter, Tizard and Whitmore, 1970) was calculated for each of the three absence groups, intermittent, parmanent or no absence. The number of children in each absence group obtaining such a score may be found in Appendix 6.1.2.

A chi-squared test was carried out on the data and a significant result was obtained ($X^2 = 9.00$ d.f. = 2, $p < .05$). An examination of the data shown in table 6.1.2. indicated that the highest incidence of disorder was found in the permanent absence group and the lowest in the no absence group.

(ii) <u>Neuroticism and Anti-Social Behaviour Sub-Scales:</u>

Neuroticism and anti-social behaviour sub-scale scores were obtained for each child as described previously. An examination of the neurotic and anti-scocial behaviour sub-scale scores was carried out for children who obtained a total score of 9 or more. Rutter, Tizard and Whitmore (1970) used these sub-scale scores as a means of classifying children whose total scores were high. These children were classified as exhibiting neurotic or antisocial behaviour according to which sub scale score was the higher. Such a classification was carried out on children obtaining scores of 9 or more in this study and the results may be found in Appendix 6.1.2.

Two Fisher Exact Probability Tests were carried out on the data, one between the intermittent and no absence groups and the other

Appendix 7.3.

Means and standard deviations of scores obtained by all children on the Children's Behaviour Questionnaire for Completion by Teachers: Scale B(2)

			Intermittent Absence Group	Permanent Absence Group	No Absence Group
MALES	Middle Class	Mean	3.21	7.88	3.00
		Standard Deviation	4.26	5.33	3.02
		Number of Subjects	14	8	15
	Working Class	Mean	3.40	6.56	5.07
		Standard Deviation	4.45	5.98	3.77
		Number of Subjects	15	16	14
FEMALES	Middle Class	Mean	2.44	2.56	2.85
		Standard Deviation	3.18	2.88	2.67
		Number of Subjects	16	9	13
	Working Class	Mean	3.27	6.18	2.08
		Standard Deviation	4.65	4.21	2.10
		Number of Subjects	15	11	13
Total for all subjects in each absence group		Mean	3.07	5.89	3.27
		Standard Deviation	4.07	5.10	3.10
		Number of Subjects	60	44	55

Appendix 7.4.

Results of the three way analysis of variance performed on total scores obtained by all children studied on the Children's Behaviour Questionnair for Completion by Teachers: Scale B(2)

Source	S.S.	d.f.	M.S.	F	Significance levels
Sex (A)	89.97	1	89.97	5.52	.05
Social Class (B)	20.24	1	20.24	1.24	n.s.
Type of Father Absence (C)	210.56	2	105.28	6.45	.01
A x B	7.06	1	7.06	< 1	n.s.
A x C	32.77	2	16.38	1.00	n.s.
B x C	2.62	2	1.31	< 1	n.s.
A x B x C	86.15	2	43.08	2.64	n.s.
Subjects within groups	2397.04	147	16.31		

between the permanent and no absence groups. No significant results were obtained ($p > .05$). That is father absence had no signficant effect on the relative incidence of neurotic and anti-social disorder.

Discussion

The analyses of the results of the incidence of emotional and behavioural problems in all the children studied revealed that children experiencing intermittent and permanent father absence were more likely to exhibit psychiatric disorder, as indicated by their scores on Scale A(2) and Scale B(2) than were children experiencing no father absence.

The findings confirmed those reported in the main thesis.