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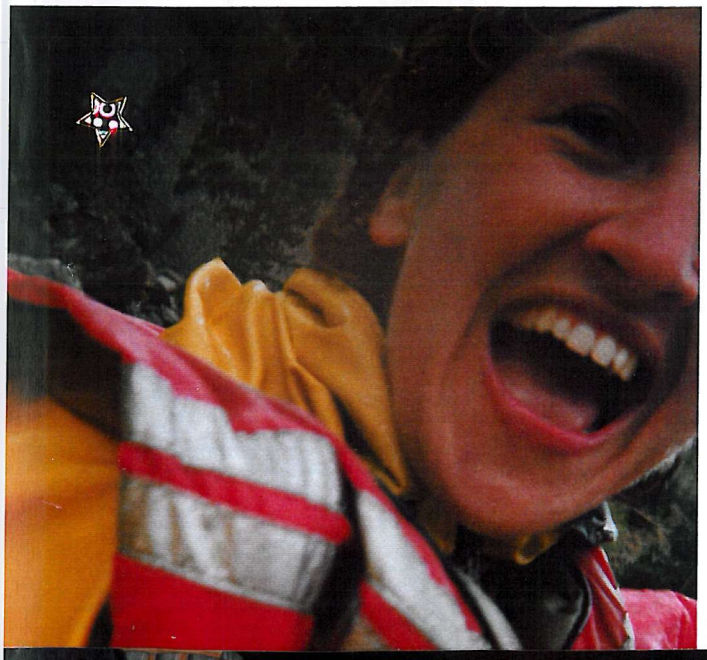

UNIVERSITY OF SOUTHAMPTON

Mothers' attributions for their own and other children's difficult behaviours: Is there evidence of a child-serving bias?

Deborah Jane Cornah

Doctor of Philosophy

Faculty of Social Sciences
Department of Psychology

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UNIVERSITY OF SOUTHAMPTON

ABSTRACT

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MOTHERS' ATTRIBUTIONS FOR THEIR OWN AND OTHER CHILDREN'S DIFFICULT BEHAVIOURS: IS THERE EVIDENCE OF A CHILD-SERVING BIAS?

By Deborah Jane Cornah

This thesis examined mothers' attributions for difficult behaviours in their own and other children. Study One established that mothers display an attributional bias in favour of their own child compared to a hypothetical other child. Study Two replicated this finding and showed that levels of this child-serving bias were not a function of the extent of information mothers hold about their own and three other hypothetical children. Study Three showed that mothers are biased in favour of their own child in comparison to a known other child both in the attributions offered for their behaviour and the optimism they have concerning their child's future. Both of these effects are moderated by the extent to which mothers see their child as part of themselves. Further, these effects are moderated by the levels of threat present in the behavioural situation. It is argued that the data are consistent with a motivational model of attributional bias and that mothers demonstrate a child-serving bias in order to protect or maintain a positive self-concept.

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"And we rejoice in the hope of the glory of God."

Romans 5 v 2

Introduction

Contemporary models of parenting assert that a central factor regulating the behaviour of parents is their assessment of the causes of their child's behaviour and disposition (e.g., Dix & Grusec, 1985; Campbell, 1996; Bugental, Johnston, New & Silvester, 1998; Bugental, Brown & Reiss, 1996). Such research is grounded in attribution theory, an information processing approach that considers social behaviour to be influenced by an individual's assessment of persons, behaviours and situations (Dix & Grusec, 1985). It tends to fall into one of three categories; that focusing on parent variables, that investigating child characteristics and that examining situational factors. Four attributional models will be summarised to provide a context for the review of research involving parent attributions. Potential sources of bias in attribution formation and maintenance will then be examined.

Attribution Theory

Four attributional models have been central to the study of adult social inference: Heider's (1958) original formulation and three derivatives; Jones & Davis' (1965) model of correspondence inference; Kelley's (1967) covariation model and Weiner's (1979a) model of attributional dimensions. These models are, on the whole, generally compatible, but each emphasises different aspects of the attribution process.

Heider's Theory of Naïve Psychology

Heider (1958) established the field of attribution theory. He based his account on the "lens" model of perception developed by Brunswick (1956) to explain how people perceive objects. According to Brunswick, objects are never directly perceived; instead their perception depends on the attributes of the object itself, on the context in which the object is perceived, on the manner in which it is perceived (e.g.,

through a fog or tunnel or a prism), and on the characteristics of the perceiver. The final perception is based on all these components - object, context, mediation and perceiver. The status of people as causal beings, however, introduces two concepts not necessary in object perception but crucial, according to Heider, for understanding the attributions by people of other people and their behaviours. Firstly, the locus of causality - be it in the person, the environment or both - affects one's understanding of why someone behaves as they do. Secondly, the perception of responsibility for outcomes affects attribution formation. In Heider's formulation, levels of responsibility depend on the degree of intentionality of the outcome. Whilst Heider's thinking on causality and responsibility did not itself prompt much research (see Fiske & Taylor, 1991, for a review), it did give rise to subsequent theoretical work that was more amenable to empirical scrutiny.

Jones & Davis' Correspondent Inference Theory

The fundamental proposition of the Jones & Davis model is that people strive to create explanations for other peoples' behaviour that are both stable and informative, in order that predictions of future behaviour can be made. The goal, therefore, of attribution formation is to evaluate the intentionality and stability of any given behaviours so as to be able to infer something that corresponds to the underlying disposition of a person. The ability to create these correspondent inferences depends on knowing whether the person exhibiting the behaviour (actor) understood the effects of the behaviour and had the ability to produce them. For example, if a one year old tore pages from a book one might not infer that it was intentional, but one may

certainly infer intentionality if a ten year old did the same.

Jones & Davis recognised that to make inferences that implicate an underlying disposition or preference requires more information and analysis. In short, intentionality is inferred when the social perceiver attributes three factors to the actor. First, that the knowledge that the consequences that occurred were likely. Second, that the desire to produce those consequences existed and thirdly, the ability to produce those consequences if desired was present (Dix & Grusec, 1985). Furthermore, Jones & Davis argued that the strength of the underlying intention can be identified by looking at the consequences of different potential actions. If a person chooses 'action A', one can compare the distinctiveness of the consequences of 'action A' with those of 'action B' to infer the intentionality of taking 'action A'. The example offered by Jones & Davis to illustrate this 'analysis of noncommon effects' is to imagine 'student 1' has been offered places on two academic courses. If they are identical in format, with the exception that 'Course A' has a clinical component and 'Course B' does not, and the student chooses 'Course A', one may infer that clinical training is important to the student. Furthermore, if some negative elements are incorporated to 'Course A' and that course is still chosen, one may infer that the clinical training is especially important. In summary, the fewer the distinctive consequences, the more confident the inference. The more negative the elements incorporated into the chosen alternative, the more one can infer the importance of the distinctive consequence.

Kelley's Covariation Model & Causal Schemata

Kelley's (1967, 1972a) formulations of the attribution process allow us to distinguish between cases in which people have access to multiple instances of the same or similar events and those in which people make assessments about behaviour based on single events. As well as making attributions of causality to other people, these models also detail the processes by which people explain environmental and personal factors.

Kelley's underlying assumption is that the process of causal analysis begins when a person is provided with inadequate information with which to function effectively. This inadequacy may be the result of one or many causes, including a lack of support for beliefs, ambiguous information, the labeling of one's views as inappropriate or untrue and a lack of self-confidence. Under such or similar circumstances, and when multiple instances of a behaviour are accessible, Kelley proposes that the social perceiver employs a covariation principle to infer the causes of events. If a child has a tantrum every time they have a sweet, fizzy drink that is evidence of a high covariation. If they also have a tantrum at other times, that is a low covariation. In short, in trying to understand the cause of some effect, one observes the covariation with various potential causes and attributes the effect to the cause with which it most closely covaries.

In particular the causal locus (internal versus external) of behaviour and events is assessed. Three dimensions are involved in this process: consensus, distinctiveness and consistency. Logical implications for causation are created according to the pattern of the information garnered along these dimensions: the locus of causation is internal when a behaviour covaries with a particular actor but not with a

particular situation, whereas the reverse is true for an external attributions. Plenty of empirical data supports this proposition (e.g., DeVitto & McArthur, 1978; Ruble & Feldman, 1976). Importantly, although the principle of attribution based on consistency and distinctiveness appears to be similar regardless of the object of attribution (Dix & Grusec, 1985), attributions about children based on consensus may be different than those about adults. This is because Kelley's model implies that parents may make a developmental assessment of the appropriateness of the given behaviour or event, such that attributions for identical behaviours may change as a child matures. When information about these dimensions is scarce, Kelley argues that people invoke causal schemata to explain events. On the basis of personal experiences with cause-effect relationships in the world, it is proposed that people develop certain abstract conceptions of how causes work together to yield effects. We use these schemata as a kind of 'causal shorthand' when information about consistency, distinctiveness and consensus is absent or ambiguous.

Weiner's Taxonomy of Attributional Dimensions

Weiner's (1979a) model proposes that an attribution's effect on behaviour is determined by its position along various attributional dimensions. The model implies that responses to behaviour may depend on specific responses to the perceived stability (stable-unstable), generality (general-specific), locus (internal-external) and controllability (controllable-uncontrollable) of behaviour. Weiner and his colleagues have generated much support for this idea (e.g., Weiner, 1979a, 1980; Weiner et al., 1972; Weiner, Graham & Chandler, 1982; Weiner, Russell & Lerman, 1978, 1979b). As well as providing a theoretical taxonomy of the attributional process, it also

suggests that behavioural responses depend on beliefs about the stability, locus and controllability of behaviours.

Weiner's work has been built upon extensively. Five dimensions are commonly considered as crucial in the understanding of causal explanations - internality, controllability, stability, universality and globality (see Leeds Attributional Coding System, LACS, Stratton, Munton, Hanks, Heard & Davidson, 1988). Each can be best summarised by a question, the answer to which can be placed at some point on the continuum between the two poles of the dimension, as follows:

1. internal-external: "to what extent do you think that the behaviour or event is caused by something specifically to do with person or something else?",
2. controllable-uncontrollable: "to what extent do you think that person would have control over behaviour or event?",
3. stable-unstable: "to what extent do you think that the cause of behaviour or event will be present again in the future?",
4. universal-personal: "to what extent do you think that this behaviour is caused by something unique to person or event or by something common to most people or events?", and
5. global-specific: "would the cause influence the person or event in other situations or would it only influence this sort of situation?"

Attributional Biases

Although the models presented offer idealised frameworks within which to understand inference mechanisms, systematic deviation from rational models of attribution are well established. Several attribution biases may have significant effects on perceptions of behaviour. One important bias is

the self-serving bias (SSB). Heider (1958) proposed that people tend to perceive, or at least report, events in ways that cast themselves in the most favourable light - that is, to take more than one's fair share of credit for good outcomes, but less than one's fair share of responsibility for negative outcomes. In Weiner's (1979a) attributional terms, causes for positive events involving the self are rated as more internal, stable, and global, whereas causes for negative events rated as external, unstable and specific. This explanatory discrepancy or bias on the part of the actor is commonly observed, and remains even when controlling for imperfect information-processing strategies such as selective attention, differential access to performance information, or memorial differences (Sedikides, Campbell, Reeder & Elliot, 1998). There are many influences upon the extent and magnitude of the SSB, and much research has taken variables in isolation and explored their moderating effect on the SSB (examples including: role, Ames, 1975; task importance, Forsyth & Schenkler, 1977; self-esteem, Fitch, 1970; achievement motivation, Bar-Tel & Freize, 1977; self-focused attention, Federoff & Harvey, 1976; task choice, Arkin, Gleason & Johnston, 1976; outcome expectancies, Weary-Bradley, 1980; perceived task difficulty, Schopler & Layton, 1972; interpersonal orientations, Miller, 1976; status, Johnston, 1966; affect, Rizley, 1978; locus of control, Davis & Davis, 1972; gender, Ames, 1975, Bar-Tel & Freize, 1977).

Campbell and Sedikides (1999), in a meta-analytic review of experiments testing the SSB, have argued that a common explanatory mechanism for the seemingly diverse demonstrations of the SSB is self-threat, that is a threat to the (usually positive) status of an individual's self-concept (see Baumeister et al, 1996). In short, if self-threat is to

occur, a condition that is perceived as unfavourable to the self ought to be present, which, in turn, will motivate individuals to act in ways that counter and minimise the threat. The self-threat model of the SSB follows in the tradition of other influential views of the self, which also pertain to the notion that people are inherently motivated to maintain the integrity of a positive self-concept in the face of threatening information (e.g., Aronson, 1992; Deci & Ryan 1987; Epstein, 1973; Freud, 1923, 1961). SSB attributions can be seen, therefore, as key strategies in avoiding self-threat; the magnitude of the bias theoretically reflecting the extent of the threat.

Parental Attribution and Behaviour

Parental attribution takes place in a social context that is likely to exert an important influence on the attribution process, and this context has a number of characteristic features. Firstly, the objects of attribution, children, are constrained by developmental limitations that are beyond their control. Because attributions are predicated on the condition of free and unconstrained choice, children's behaviour may and should often be seen to reflect age-related deficits in knowledge and skill rather than the intentions or dispositions of the child. Secondly, the child whose behaviour is being explained is undergoing rapid, systemic growth. As such, not only must parents assess the causes of behaviour amidst changing external conditions, but they do so as the child's needs, knowledge, abilities and motivation change dramatically. These circumstances may produce attributions that are less stable than those made about adults and that depend on beliefs about development that change over the course of childhood and adolescence. The third characteristic of the parenting context is the imbalance of power and authority, such that children's

behaviour can be attributed to external pressures such as the influence of parents or other powerful persons. Finally, the relationship between parent and child is defined by a biological and social interplay not found in other relationships, meaning that children's behaviour has personal relevance to parents. Being their caretakers, socialisers and regulators, behaviour displayed by children relates directly to parental goals and may affect senses of competency and efficacy as a parent (Johnston & Mash, 1989). All of this is important, of course, only to the extent that parental attribution formation links directly to subsequent parenting behaviour.

A number of researchers have examined the link between parent attributions for child behaviour to subsequent parenting behaviour and consistently found attributions to be associated with parental behaviour. Broadly speaking, there are two approaches to the study of this link. The first examines the possibility of a direct attribution-behaviour link, usually by presenting parents with vignettes of behaviour that they are required to rate on a number of attributional dimensions. The parents are then asked to offer their behavioural response to the behaviour and responses are compared to the attributional ratings. (e.g., Dix & Grusec, 1985, Dix, Ruble & Zambrano, 1989). Alternatively, researchers assess attributions about own child's behaviour using a questionnaire and then go on to measure aspects of parental behaviour in a different context (e.g., Alexander, Barton, Waldron & Mas, 1989; Bugental & Shennum, 1984; Larrance & Twentyman, 1983).

Direct Attribution-Behaviour Link

Using vignettes of child behaviour situations, Dix and his colleagues (Dix & Grusec, 1985; Dix et al., 1989) found that

mothers predicted that they would use more power-assertive discipline strategies when they inferred that their children understood the rules, had the capacity to act appropriately and were responsible for their negative behaviours. Their study was complex and examined a number of variables proposed to mediate the attributional system, and aspects of it will be examined in more detail later in the chapter. Mackinnon (1989) found that when mothers perceived their sons' behaviours to be intentional, they were more coercive in interactions with the child. Similarly, Geller and Johnston (1995b) used attributional dimensions to predict mothers' responses to children's non-compliant behaviours. Dimensions of internality and controllability (cf. Weiner, 1979 above) for mother-centred and child-centred attributions both predicted intensity of parenting responses.

A further direct association is suggested by the finding that parents known to have a history of abuse with their children form more negative attributions about their children's behaviour than non-abusive parents (Bauer & Twentyman, 1985; Larrance & Twentyman, 1983). Larrance and Twentyman asked mothers with a prior history of child abuse, child neglect or no known history of maltreatment, to respond to a standardised sequence of photographic stimuli of their own child and another child. The photographs depicted children in interpersonal situations in which children misbehaved or were "transgressed upon". Results showed that the abusing mothers' attributions about their own child were the most negative - that is, their own child's misbehaviour was attributed to internal and stable causes, whereas their positive behaviour was perceived as external and unstable to the child.

One of the difficulties with much of the research in the field is that one cannot imply direction of causality. That

is, one cannot know whether mothers of difficult children make attributions that reflect more accurately the nature of their child's problems than mothers of children not perceived as difficult. To address the direction of causality underlying the robust association of mothers' attributions for child misbehaviour and mothers' parenting, Slep and O'Leary (1998) experimentally manipulated mothers' attributions for their hard-to-manage toddler's misbehaviour. They did this by telling some mothers that their children were not to blame for their misbehaviour and some that their children misbehaved voluntarily, during a previous laboratory session. The feedback mothers received about their child's behaviour, however, was actually determined by randomly assigning mothers to either the child-responsible or the child-not-responsible attribution condition. Mothers and children were then videotaped interacting in typical but challenging situations. Relative to mothers who were told that their children were not to blame for misbehaving, mothers who were told that their children would misbehave voluntarily and with negative intent were rated as significantly more overactive in their discipline and felt angrier; their children also exhibited higher rates of negative affect. Their conclusion, in support of much previous research summarised here, was that mothers' attributions for children's misbehaviour can determine the harshness of their discipline.

Anderson, Lytton and Romney (1986) also examined the direction of causality by comparing the reactions of mothers of conduct-disordered boys with those of normal boys. Each mother interacted with her own child, with another child of similar behavioural status to her own and with a child of different behavioural status to her own. Mothers' positive, negative or requesting behaviours, and the child's compliance

were counted. They found that although the mothers did not differ in their behaviours, they all addressed more negatives and requests to conduct disordered boys than normal boys, implying that it is "the child's, and not the mothers' behavioural tendency [that] is the major influence in conduct disorder" (p.604).

Indirect Attribution-Behaviour Link

Previous work by Geller, Johnston & Gabille (1991) has also addressed the attribution-behaviour relationship in a study where mothers read descriptions of ambiguous negative events involving either themselves or their child. Mothers were asked to imagine that the situations happened to them or their child, to answer a series of questions about what they thought caused each of the situations, and describe what they would do in each situation. Mothers' causal attributions in both types of situations (those involving themselves and those involving their child) were found to be related to various aspects of their predicted behavioural responses. For instance, less favourable attributions about the cause of their child's negative situation (i.e., viewing the cause of the situation as something that would be present in the future, and as something likely to influence other similar situations) were associated with more negative anticipated parenting behaviours, such as expressing negative emotion, actively blaming the child, or telling the child that he/she should have behaved differently. Alexander et al., (1989) conducted three studies of families with a delinquent adolescent. Families in the study were provided with different forms of a positive versus negative interactional context. The first study demonstrated that the negative context elicited more negative behaviours than did the positive context in subsequent interactions between parents and their adolescent. The second study showed that the

attributions parents have regarding disposition were influenced by the manipulation of 'set' (with dissatisfied set producing negative blaming attributions and a satisfied set producing nonblaming, positive attributions). The third study demonstrated the stability and unresponsiveness of parental 'set' to subsequent positive reattributions of the context. Taken together, their data demonstrate the influence of attributions on parent affect and, subsequently, response to behavioural difficulties. Although parent attributions are recognised to influence parent behaviours, then, which in turn impact on child behaviours (e.g., Patterson, 1982), these influences are also acknowledged to occur in the opposite direction.

An illustration of the reciprocal influence of child behaviour on parent attributions is suggested in a study comparing the attributions of mothers of AD/HD children with those of mothers of non-problem children (Sobol, Ashbourne, Earn & Cunningham, 1989). In responding to written descriptions of child compliance in which they imagined that the child in the descriptions was their own, mothers of AD/HD children viewed the cause of their child's behaviour as more unstable than did mothers of control children. It is likely that mothers' experiences with these children (whose behaviour is characterised by known patterns of attention and implies control difficulties) has led them to form different attributions about the causes of child behaviours than mothers who have experience with non AD/HD children. Numerous other studies have also examined the interactive influence of parent-child interactions on the formation and maintenance of attributions and behaviour. In the experiment reported earlier, conducted by Anderson et al.,(1986) mothers of conduct disordered boys were also more coercive toward their own children than to other conduct-disordered children. They

argue that this indicates the operation of transactional effects - that is, reciprocal interchanges over time between the parent and child - through which they explain the developmental outcomes in the child. In sum, there is sufficient evidence to assert that the interplay between parent attributions, parent behaviours and child behaviours is conclusive.

Bias in Parental Attributions

There is an assumption based upon the attributional literature which suggests that parents will not be objective observers of their children's behaviour. In fact, under most circumstances parents will be positively biased in their explanations in two related ways. Firstly, they tend to report that they themselves have an increased causal role in their child's positive behaviours and a decreased causal role in their child's negative behaviours, in keeping with the self-serving bias pattern described earlier. This bias was captured in a study conducted by Himelstein, Graham & Weiner (1991) who examined mother-centred attributions for their children's outcomes in three domains. Compared to gifted and regular children, the outcomes of special education children (which were rated more negatively) were perceived as more due to environmental than parental influences. Sobol et al., (1989) also found evidence for a maternal self-serving bias, in that mothers rated attributions for non-compliance as more external to themselves, and took more credit for achieving compliance and for positive behaviours in children. Secondly, some studies also reveal that parents tend to regard their children's positive behaviours as caused by innate, stable and dispositional factors (to the child) and their negative behaviour as temporary and situationally caused. For example, Gretarsson & Gelfand (1988) asked sixty mothers to describe their child's positive and negative

characteristics and specific instances of their child's desirable and undesirable behaviours. As predicted, mothers perceived desirable child behaviours as caused by factors internal to the child and undesirable ones as unstable and situationally caused. Positive personal characteristics were also seen as stable and inborn, but negative ones as transitory. Freeman, Johnston & Barth, (1997) also found a bias in favour of the child for positive behaviours, with parents rating causes as more internal to child and negative ones more situationally caused than either inattentive-overactive or oppositional-defiant behaviours. These studies lend support to previous work which has demonstrated this tendency for parents to positively favour their child when explaining their behaviours (e.g., Dix & Grusec, 1985; Goodnow, Knight & Cashmore, 1986).

Formation of Parental Attributions

Bearing that in mind, let us now turn to a review of the other relevant literature conducted in this field. Three lines of research dominate the literature on parental attributions. First, researchers have examined the relationship between parental characteristics and attributions formed about the causes of child behaviours. Second, the impact of different child characteristics on parental attributional style has been studied. Finally, the impact of situational factors has been addressed. This review assembles the studies accordingly, to identify those variables which exert an influence on the formation and maintenance of attributions generally. It also establishes those variables which may magnify or limit the extent of the biases parents demonstrate in their explanations of child behaviour.

Parent Characteristics

Some of the more compelling evidence for the impact of parent characteristics on attributional style comes from the literature on child abuse. As mentioned earlier, mothers with a history of abusive behaviour toward their children formulate more negative attributions (Bauer & Twentyman, 1985; Larrance & Twentyman, 1983), such that the 'normal' tendency to offer biased attributions for behaviour disappears. Bauer & Twentyman compared mothers with a previous history of child abuse or neglect with mothers who had no known history of child maltreatment. Aversive child-related and non-child-related stressful stimuli were presented to all mothers and those with a history of abuse consistently ascribed more malevolent intentionality to their child than other mothers. Similar evidence was also found in the study described earlier conducted by Larrance & Twentyman, who asked abusive, neglectful and control mothers to offer explanations for children's transgressions and failures. Control mothers typically offered external and unstable child-centred attributions when their own child misbehaved whereas when an 'other' child misbehaved, stable and internal attributions were offered for the behaviour. Interestingly, the opposite pattern occurred for abusive mothers (who demonstrated a bias in favour of the 'other' child) and no bias was demonstrated by neglectful mothers.

Although much of the research on parental attributions has focused exclusively on mothers, a small number of studies have also included fathers and examined the influence of parent gender on attributions for children's behaviour. The results have been inconsistent. For example, Sobol et al., (1989) asked ninety-one parents to provide reasons for the compliance and non-compliance of either AD/HD or non-AD/HD offspring. Mothers rated attributions for non-compliance as more external (to themselves) than did fathers. In contrast,

other studies have found no differences in attributional ratings between mothers and fathers. In particular, Johnston & Patenaude (1994) found no differences in mothers' and fathers' ratings on attributional dimensions for either inattentive-overactive or oppositional-defiant behaviours displayed by their AD/HD children. Subsequent research in the same laboratory (Johnston & Freeman, 1997; Freeman et al., 1997) also revealed no parent gender effect, although they do conclude that small sample sizes and a p value approaching significance in some cases warrants further examination of this factor.

Parental depression is another factor considered important in the attribution process. Firstly, there is a vast amount of research to support Seligman's concept of a "depressive attributional style" (Seligman, Abramson, Semmel & Von Baeyer, 1979). In general, depressed people tend to attribute bad outcomes to internal, stable and global causes rather than the external, unstable and specific causes non-depressed populations tend to offer. That is, they do not demonstrate the typical patterns of self-serving bias demonstrated by non-depressed populations, and actually offer a converse evaluation of their causal role in events. This tendency supports predictions made by the model of learned helplessness (Abramson, Seligman & Teasdale, 1978) which proposes that individuals who make attributions in such a way are more likely to respond to uncontrollable events in a 'helpless fashion'. There is also literature that highlights the association between mothers' depression and behavioural difficulties; mothers reporting elevated symptoms of depression also report increased levels of behavioural disturbance in their children (e.g., Cunningham, Benness & Siegel, 1988; Griest, Wells & Forehand, 1982).

Despite these two sustained lines of enquiry, the impact of depression on attributions for child's behaviour has been explored relatively infrequently. However, the influence of depression on self-attributions suggests that depressed mothers will make more negative attributions than well mothers about their child's behaviour, in terms of their own role in the cause of the behaviour as well as their child's causal role. Geller and Johnston are amongst the few researchers who have explored this avenue of investigation (e.g., Geller & Johnston, 1995a, 1995b). They asked 82 mothers of children aged 5 - 12 years to rate dimensions of causal attributions for hypothetical negative situations involving either themselves or their children. They found that mothers who reported higher levels of depressed mood were more likely to attribute children's negative experiences to causes within the child and within the child's control.

White & Barrowclough (1998) examined spontaneous causal attributions reported by depressed and non-depressed mothers of pre-school aged children with behavioural problems. Fifty mothers (25 depressed and 25 non-depressed) were interviewed and each interview was then assessed for attributions about a range of behavioural difficulties parents had experienced with their child. White & Barrowclough developed indices of mother and child responsibility for each behaviour. Child responsibility was obtained by counting the number of attributions that were internal and personal to the child and controllable by the child, yet external to and uncontrollable by the mother. Mother responsibility was obtained by counting the number of attributions that were internal to and controllable by the mother, and external and uncontrollable by the child. Both of these counts were then divided by the total number of attributions and expressed as a percentage.

They found that depressed women more often held their child responsible for their displayed behavioural difficulties than did non-depressed mothers and there was also a trend for depressed mothers to suggest the cause of behaviour was something internal to themselves. In short, it appears that maternal depression reduces the tendency mothers ordinarily have to offer attributions which favour themselves or their child.

Child Characteristics

Some research has distinguished parents' attributions on the basis of different characteristics of their children. Older children are consistently reported to be perceived as more responsible for their behaviours than their younger counterparts (e.g., Walker, Garber & Vanslyke, 1995; Johnston, Patenaude & Inman, 1992; Dix & Grusec, 1985; Freeman et al., 1997), and boys more so than girls (Phares, Ehrbar & Lum, 1996; Dix & Grusec, 1985). Different aspects of a child's intellectual and behavioural status have also been examined.

Himelstein, Graham & Weiner (1991) presented mothers with questions that examined the perceived contribution of child-rearing practices, genetics or environmental factors on aspects of their child's functioning. Mothers of 'gifted' children (with IQs of 140 or more) more frequently endorsed child-rearing attributions than did mothers of 'special needs' children (with learning disabilities or severe emotional disturbance) for the positive aspects of their children's academic, social and personality domains. Similarly, compared to gifted and regular children, the outcomes of special education children were perceived as more due to environmental than parental influences.

The impact of child's behavioural status on parental attributions is another variable that has been examined. Although the focus and method of studies has varied extensively, research converges on the conclusion that the behavioural status of children affects the formation and maintenance of parental attributions. For example, parents of aggressive children are more likely to attribute their children's misbehaviours to more dispositional, intentional and stable causes (within the child) than are parents of non-aggressive children. Fincham & Emery (1988) examined the impact of a child's psychological disturbance on adults' judgments of causation and blame for different negative outcomes. They concluded that the inferences drawn about a child on the basis of their psychological status affects the attributional process and subsequent behavioural responses to negative behaviours. In particular, the dimension of controllability - that is, the extent to which adults perceived that the child could control their behaviour - was important in the accounts offered for the behaviour. Although their study used undergraduates and not parents, similar effects of child's status (aggressive, non-aggressive) have been found using populations of parents (e.g., Baden & Howe, 1992; Barkley, Anastopoulos, Guevrement & Fletcher, 1992; Johnston et al., 1992).

Three studies have examined the impact of AD/HD on parents' attributions for child behaviour. A study mentioned earlier, conducted by Sobol and colleagues (1989), asked 91 parents to rate their own role in causing their child's behaviour. Mothers (but not fathers) of AD/HD children saw their child's behaviour as being more unstable and more out of their control than did control parents. Johnston & Freeman (1997) also compared attributions made by parents of AD/HD and non-

AD/HD children, but focused on child-centred attributions. Specifically, attributions for inattentive-overactive (IO), oppositional-defiant (OD) and prosocial (PRO) child behaviours were compared in parents of AD/HD and non-AD/HD children. The parents of children with AD/HD perceived IO and OD behaviours as more internally caused, less controllable by the child and more stable. Conversely, for prosocial behaviours, parents of AD/HD children rated the causes as less internal and less stable than control parents. By including attributions for prosocial behaviours and introducing a control group, this study built on previous work in the same laboratory (Johnston & Patenaude, 1994).

Other forms of behavioural disturbance in children have also been reported to exert an influence on the attributions of their parents. Geller & Johnston (1995a) assessed mother- and child-centred attributions in mothers, having taken measures of mother's depression and child's conduct problems. Correlational analyses revealed that higher ratings of conduct problems were associated with perceiving the cause of child's negative experience as more global and stable. Cornah, Sonuga-Barke, Stevenson & Thompson (submitted) found similar results, indicating that mothers of children displaying elevated levels of behavioural difficulty hold themselves less responsible and their children more responsible for negative behaviours. All of these findings indicate the impact of the child's behavioural status on the way mothers understand and report their child's behaviour and again shed light on particular characteristics that may interfere with the usual mechanisms of attribution formation.

Situational Factors

The associations between parent characteristics and attributions and child characteristics and attributions have been examined in the context of generalised response patterns that parents adopt to explain children's behaviour. These are important because we see that particular attributional styles are associated with particular characteristics such as parental abusiveness or child's behavioural status that apply to parental perceptions of behaviour across a range of situations. However, even in combination, there exists considerable unexplained variance in attributional ratings made by parents. That is, variations in ratings occur within each of the groups across situations.

Dix has been an influential investigator of the impact of situational variables on parents' attributions (e.g., Dix & Grusec, 1985; Dix, Ruble, Grusec & Nixon, 1986; Dix & Lochman, 1990; Dix, 1991a; Dix and Reinhold, 1991). For example, in one study (Dix & Grusec, 1985), the type of child behaviour affected parent attribution and was a significant determinant of every social inference measured. Altruistic behaviours (helping, sharing, showing concern) were seen as more stable, general, intentional, controllable and more the result of dispositions in the child than were either failures to be altruistic (not helping, sharing or showing concern) or explicit norm violations (fighting, stealing, lying). Additionally, failures to be altruistic were rated as less intentional and blameworthy than overtly defiant behaviours. This pattern of results resembles those described earlier that fit the pattern of the self-serving bias, and Dix & Grusec identify this mechanism as a possible explanation of their findings. They also suggest that the difference between the last two conditions may be a reflection of behaviour complexity. Parents may be more upset with complex negative

behaviours which they infer children don't understand or cannot control than with simpler negative behaviours that they infer children do understand and control.

Dix has also demonstrated the importance of situational variables on parental attributions with another colleague (Dix & Reinhold, 1987). They made videotapes that depicted children disobeying simple requests (e.g., "put on your shoes before you go out") either immediately or following 15 seconds of continuing activity. Parents watched these tapes and were asked to make attributions about the child's behaviours. Parents rated immediate disobedience as more intended and more reflective of negative dispositions in the child than delayed obedience. On this basis, Dix & Reinhold suggested that parents perceive that children have more difficulty in obeying a request when it is delayed and this lowers the intentionality of their disobedience.

Parental affective state is another contextual variable that may influence attributions. To test the effect of parent affect on attributions for child behaviour, Dix (1989) had mothers wait until they found themselves in either happy, angry or neutral moods and then watch videotapes of mothers and children in discipline situations. Mothers who reported feeling angry prior to watching the tapes attributed the observed child behaviours to more dispositional characteristics, anticipated that compliance would be harder to obtain, and felt that greater sternness should be used than did mothers who felt in neutral moods prior to watching. In another study (Dix and Reinhold, 1991), mothers were induced to feel happy, angry or unemotional using a standardised mood induction procedure. They were then shown videotaped interactions of children disobeying parental requests. Unlike the previously cited findings, the angry

mood group did not form significantly more negative attributions than the neutral mood group, although there was a trend in that direction.

As well as the demonstrated importance of isolated parental, child and situational characteristics, there are a number of studies that go some way to illustrate the interactive nature of these influences on each other. Naturally, any parent-child relationship is characterised by a unique contextual framework within which behaviours and social cognitions are promoted and maintained. However, a number of elements of parent-child relationships have been identified as having a consistent impact upon the attributional process of parents, the behaviour of the child and the maintenance or changing of both. Research by Bugental and colleagues has illustrated this more systemic approach to the understanding of the dynamic element of parent-child relationships (e.g., Bugental et al., 1993; Bugental et al., 1996; Lewis, Bugental & Fleck, 1991). Mothers who perceived themselves as having low control over the outcomes of their interactions with their children, when paired with computer-simulated unresponsive children, manifested elevations in defensive arousal and reported more negative affect to the child. The role of social cognitions therefore mediated autonomic and affective responses to children's behaviour.

Sacco & Murray (1997) examined whether judgments of a child's dispositional characteristics (trait conceptions) and causal attributions contribute independently to maternal relationship satisfaction. Interestingly, as well as contributing independently to mother relationship satisfaction, attributions also moderated the association between trait conceptions and relationship satisfaction. The model they present, therefore, identifies the importance of taking into account the mothers' previous experience with

their child in the understanding of their attributional style, as well as the implications of their satisfaction with the relationship on future attributional and trait perceptions.

Dix (1993) has also reported the interactive dynamic involved in attributional processing. He reviewed research on dispositional attributions about children and its contribution to knowledge of both socialisation and attribution processes. Because dispositional attributions reflect the interdependent behaviours that characterise parent-child relationships, he argues that they may depend as much upon processes that regulate behaviour as on processes that regulate inference. By making attributions about children's behaviour, parents regulate their own reactions to that behaviour, and thus to the socialisation experiences to which children are exposed, as well as influencing children's conceptions of themselves and of how adults want them to act. This continual pattern of attribution-behaviour interaction influences parental and child expectations and attributions. Hastings & Grusec (1998) have also examined the role of expectations by studying parental responses to parent-child disagreement. Causal explanations offered by parents differed according to the outcomes parents hope to achieve during interactions with children. Parents focused on relationship-centred (RC) outcomes or goals, rather than parent-centred or child-centred goals, tended to demonstrate warmer, more negotiating and co-operative parenting behaviours. Furthermore, focus on RC goals increased sympathy for children and improved children's affective states. Further work by Hastings (Hastings and Rubin, 1999) has added weight to the argument for transactional models of parent-child relationships. The results of longitudinal analyses supported models of socialisation that recognise children's effects on

parents' development. Mothers' authoritarian attitudes and toddlers' aggressive behaviour were predictive of maternal beliefs about children's aggression two years later. Interactions between the sex of the children and toddlers' aggressiveness were also interesting. Mothers were expected to be less puzzled by aggression when their children had been aggressive as toddlers, but this was true only for mothers of girls. Boys are seen as more aggressive than girls from toddlerhood onwards (Sanson, Oberklaid, Pedlow & Prior, 1991), and aggression is perceived as a masculine trait. Aggression is also a stable individual characteristic (Farrington, 1991). Thus, a mother may not be confused to see her pre-school aged son act in an aggressive manner, even if he had not evidenced a history of such behaviour; either cultural or personal experience could prepare the mother for this behaviour. Nor might a mother be puzzled and surprised to see her daughter act that way when she had a history of behaving aggressively with peers. When their daughters had not been aggressive toddlers, though, mothers had no ready explanation for aggressive behaviour in pre-school and were most likely to feel confused. This confusion is likely to affect explanations for the behaviour, with dimensions of stability and globality (in particular) being prone to the impact of mothers' past experience with the behaviour being explained.

Maybe a study which most singularly highlights the complex interplay of parent, child and relationship variables is by Cote and Azar (1997). They examined the influence of children's age, and parents' and children's gender on parents attributions and emotional and behavioural responses to their children's successful and unsuccessful social and academic outcomes. Seventy-six married parents of 10-, 13- and 16-year old children were asked to complete a questionnaire that

measures parents' attributions for their children's academic and social behaviour (the CESR-Parent Version; Cote and Azar, 1997). This measure describes ten academic and ten social situations, half of which depict successful outcomes and half of which depict unsuccessful outcomes. Parents were asked to rate the possible causes of each of these outcomes on a five point Likert scale. They were also asked to rate the intensity of their own emotional response to each situation and how much they agree with each of three behavioural responses for successful and eight behavioural responses for unsuccessful outcomes. Teachers of the children involved were also asked to rate the global academic performance of the children, so as the influence of the child's academic performance on their parents' attributions could be controlled for in analysis. Children's age, gender and parent gender, by themselves, did not appear to have an impact upon parents' attributions to children's outcomes. However, a series of complex significant interactions involving these variables were reported. Overall, the analyses suggested that mothers tend to see external factors as more important as boys age, while fathers tend to hold older children less accountable for their outcomes. This is manifested by fathers making weaker ability attributions for girls and weaker effort attributions for boys as they grow older, regardless of the domain (social or academic). They concluded that "the ways parent explain the causes of their children's social behaviour and academic outcomes involves a complex interaction of children's age, children's gender, parents' gender, domain and outcome" (p.23).

Summary and Hypotheses

The research reviewed so far has examined the perception of the parents' causal role as well as the child's causal role in certain behavioural outcomes. Many studies have demonstrated that mothers will ordinarily identify themselves as causally responsible for their child's positive behaviours, but not make similar claims of responsibility for their child's difficult or negative behaviours, which one would predict on the basis of attribution theory. We have also seen how a number of variables affect the tendency for mothers to make attributions that favour themselves, including mother's mental health and child's behavioural status. In a similar way, a number of studies have shown that mothers will often identify their child as responsible for positive behaviours that they exhibit but not identify their child as causally responsible for negative behaviours. The tendency to make attributions that favour their child in this way is also affected by certain characteristics, including mother's mental health and child's behavioural status, and it is to these issues that we now turn.

Two of the studies reviewed so far lean towards the view that maternal depression lowers the likelihood of mothers favourably explaining their child's negative behaviours in a way typically observed in non-depressed mothers. White and Barrowclough's (1998) study concluded that depressed mothers perceived causes of own child's difficulties as being more stable, controllable and more personal to the child than did non-depressed mothers. Having said that, all of the mothers in their sample had children with an elevated score (8 or above) on the Richman Behavioural Screening Questionnaire (RSBQ; Richman, 1977), so the effects of depression cannot really be disentangled from those of behavioural status, which we know also alters the attributions offered for

difficult behaviours. Geller and Johnston (1995a) also reported that maternal depressed mood is associated with attributing children's negative experiences to causes within the child, and within the child's control. Despite the implications, it is difficult to assess whether the non-depressed mothers in either of these studies are actually exhibiting attributions that favour their own child in comparison to an other child, because the attributions collected relate to behaviours exhibited by their own child, and they are not compared with attributions offered for any other child. They are also not compared to attributions for positive behaviours. Therefore, there is no way of knowing whether the attributions about the child's behaviour are a reflection of a general attribution style, which we already know is affected by depression, or whether depressed mothers fail to provide attributions which favour their own child in the way that non-depressed mothers might.

Similar patterns of attributional style have been noted in mothers of children with behavioural difficulties of one kind or another. Dix and Grusec (1985) report the typical pattern of attribution for mothers of non-problematic children, but in mothers of difficult children, positive behaviours are regarded as caused by something external to child and negative behaviours as more enduring (i.e., stable) and likely to affect many situations in the child's life (i.e., global). Similar patterns were found by Johnston & Freeman, (1997) and Gretarsson & Gelfand, (1988). Again, the difficulty with these studies is that they do not compare the attributions offered for own child's behaviour with those that might be offered for an other child's similar behaviour, so there is no real platform from which to claim the existence of a genuine bias in favour of one's own child.

In order to be able to effectively do this, one would need to provide mothers with the opportunity to make attributions for both their own child and an other child, and then to use those ratings as within-group factor in the subsequent statistical analysis. Only one unpublished study has directly compared attributions offered by mothers for negative behaviours in boys, according to the target of the attributional explanation - own or other child, (Geller, 1992). This study found that mothers do tend to rate own child's noncompliant behaviour as less global and stable than other children's, but did not find an effect of attributional target on ratings for internality and controllability. That the notion of some bias (offering positive attribution for own child but not an other child) is partially supported invites examination of the study design and, as the author herself comments, it is maybe because the mothers had to rate an identical description of behaviours for own and other child that the bias was not demonstrated on all dimensions: "Mothers may find it unacceptable or inappropriate to regard the same behaviour as controllable in one child and not controllable in another child of the same age and gender. However, because attributions of globality and stability reflect mothers' expectations surrounding the likelihood of the behaviour's recurrence in the future and in other situations, mothers may feel more able to distinguish between their own and other children on these dimensions." (p63).

This study recognises the need to compare explanations for behaviour witnessed in a mother's own child with behaviours demonstrated in an other child before any claims of a genuine bias in maternal attributions can be sustained. However, as well as the methodological shortcomings identified above, it did not control for the effects of maternal depression nor

child's behavioural status in its analysis. These variables have been shown to be very important in the formation of maternal attributions and therefore need to be considered in parental attributional research. Geller & Johnston's study did examine the unique and combined effects of depression and child's behavioural status on mothers' attributions for negative behaviours, but did not include attributional target as a within-subjects factor, so the extent of any child-serving bias cannot be determined. It also did not include mothers of girls. Attributions for boys' behaviour are known to be more global and stable than for girls, therefore any effect of attributional target may have been confounded by this boys-only sample.

The present study aims to address the possibility that mothers may be biased in their views of their own child's behaviour when compared to an other child's behaviour. It is concerned specifically with the mothers' perceptions of the child's causal role in the demonstration of negative behaviour and the possibility that mothers exhibit a bias in their explanations of their child's own behaviour in the same way that they would if they were attributing about their own causal role in their own negative behaviour. The hypothesis is that mothers will offer attributions for their own child's negative behaviour that are more favourable than those offered for an other child's negative behaviour. On the basis of the reviewed research, it is also predicted that differences in these causal explanations will be demonstrated on those attributional dimensions implicated in the self-serving bias - internality, stability and globality. Specifically, causes for own child's negative behaviour will be less internal-to-child, less stable and less global than those causes offered for an other child's negative behaviour. It is also hypothesised that depressed mothers will not rate

their own child's behaviour in this favourable way and may even demonstrate a reversal of the pattern predicted for well mothers. Similarly, mothers whose own child has a history of behaviour difficulties will be likely to rate their own child's behaviour as more internally caused, more stable and more global than mothers whose children are not reported to have such a history.

STUDY ONE

Method

Participants

126 mothers of 9-year-old children took part in the study. They were recruited by invitations sent to mothers of every Year 4 child in seven Hampshire schools, selected to reflect a variety in size, location and catchment area. Two schools had very low numbers of children eligible for free school meals (less than 15%), two schools had very high numbers of such children (over 80%) and three schools had between 30% and 65% of children eligible for free school meals. No information regarding the educational level or social class of individual families was received.

248 mothers expressed a willingness to take part in the study, of whom 126 completed all of the required data. The mean age of the mothers was 37 years (range 27.1 - 54.6 years) of whom 93 (74%) were married or living with a partner. The average number of children per household was 2.5 (range 1 - 6), the mean age of the target child was 9.7 years (range 7.4 - 11.1 years), of whom there were 70 boys (55%).

Materials

General Health Questionnaire - 12 Item Version (GHQ 12; Goldberg, 1982)

The GHQ is a measure of mental health that is widely used in psychological research and contains 12 items relating to psychological well-being requiring an agree or disagree response. It has been extensively used as a short screening instrument, producing results that are comparable to longer versions of the GHQ (Goldberg et al., 1997). A threshold score of 3-4 gives a good conservative estimate of minor psychiatric morbidity, and this score gives the GHQ-12 a sensitivity of .69 and specificity of .88 (Hardy, Shapiro,

Haynes & Rick, 1999). There is a copy of this questionnaire in Appendix 1.

The Strength & Difficulties Questionnaire (SDQ; Goodman, 1997)

The SDQ is a brief behavioural screening questionnaire that can be completed in about five minutes by the parents or teachers of children aged 4 to 16. There is also a child-complete version for over-11's. It is a well validated instrument and has proven to be as effective as both the Child Behaviour Check List (CBCL; Achenbach, 1991) and the Rutter Scales (Elander & Rutter, 1996) in identifying children with clinically significant levels of behavioural disturbance (Goodman, 1997; Goodman & Scott, 1999). As well as its brevity and reliability, the main advantage of this measure is that it includes items pertaining to children's prosocial behaviour. The SDQ asks five questions about the child's prosocial behaviour, alongside four other 5-item subscales measuring conduct problems, emotional symptoms, hyperactivity and peer relationships. There is a copy of this questionnaire in Appendix 2.

The Own-Child Attributions Questionnaire (OWN-CAQ)

This questionnaire is designed to elicit mothers' explanations for negative behaviours demonstrated by their own child. There is a parallel version designed to elicit explanations for other children (the Other-Child Attributions Questionnaire, OTHER-CAQ) which will be described later. It is based on the questionnaire used by Geller & Johnston (1995), in which mothers read an account of negative behaviour displayed by their child and then make ratings on the attributional dimensions of internality, controllability, stability, universality and globality. However, in order to address some of the shortcomings of previous research, the

questionnaire has been modified in a number of ways. The most important modification concerned the behavioural vignette presented to mothers as a stimulus for their attributional ratings. New vignettes needed to be devised that a) focus on only one specific kind of behavioural disturbance in children, b) describe behaviours that are not unrealistic and do reflect situations that mothers will have experienced before, and c) differ sufficiently such that non-identical vignettes can be presented in the 'own' and 'other' child conditions without confounding the design. To create suitable behavioural vignettes, a calibration exercise was conducted.

Calibration exercise.

An opportunistic sample of twenty four mothers of seven to eleven year old children, who would not be taking part in the main study, were asked to rate the perceived seriousness, normality and experience (with their own and other children) of behaviours described on each of eight scenarios involving a nine year old boy or girl.

Four of the scenarios (labeled "bike", "book", "lego" & "shop" according to a key feature of the situation) described behaviour based on four of the eight symptoms from the diagnostic criteria for oppositional defiant behaviour[1] (ODB) (see DSM-IV, American Psychological Association, APA, 1994). It was hypothesised that the symptoms associated with ODB were sufficiently wide-ranging to have been experienced by many mothers. As such, these four scenarios were intended to elicit similar ratings from mothers on the measures of

[1] Criteria for ODB are as follows: loses temper; argues with adults; actively defies or refuses to comply with adults' requests or rules; deliberately annoys people; often blames others for own mistakes or behaviour; touchy or easily annoyed by others; angry and resentful; spiteful or vindictive. (DSM IV)

seriousness and normality and to have been experienced, to some extent, by all or most respondents.

Two scenarios ("fire" & "swim") described behaviour based on the diagnostic criteria for conduct disorders[2] (CD) (see DSM IV; APA, `1994). Given the more serious nature of the symptoms of CD, it was hypothesised that mothers would rate these two scenarios as more severe, less normal and not as commonly encountered as the four based upon ODB.

Two further scenarios ("drama" and "clay") described less severe behaviours that children demonstrate, but that are either not specifically listed as symptomatic of ODB or CD (for example, fussy eating; see Richman, Stevenson & Graham, 1982). It was hypothesised that these two scenarios would be rated as less severe, more normal and more commonly encountered than both the ODB and CD scenarios. (The eight scenarios are presented in Appendix 3). Ratings were entered as a dependent variable into 4 repeated measures analysis of variance (ANOVA), with scenario type (8 levels - bike, book, lego, shop, fire, swim, drama, clay) as a within-subjects independent variable. Means and standard deviations for all measures are presented in Table 1.

[2] Criteria for CD are as follows: theft; damage to property; bullying; cruelty to animals; punching or pushing other children; initiating fights; fire-setting; truancy; lying.

Table 1

Scores from mothers' ratings of eight descriptions of misbehaviour.

	Scenario							
Measure[y]	bike	book	lego	shop	fire	swim	drama	clay
serious								
M	6.70[a]	6.08[a]	7.00[a]	7.41[a]	8.20[b]	8.93[b]	5.04[c]	4.29[c]
SD	2.07	1.61	1.38	2.06	1.38	1.37	2.44	1.96
normal								
M	6.12[a]	6.16[a]	7.00[a]	7.16[a]	8.25[b]	8.00[b]	3.58[c]	3.08[c]
SD	2.38	1.68	1.66	1.88	1.67	2.26	2.32	1.97
exp. own								
M	2.39[a]	2.12[ae]	2.00[ade]	2.43[ae]	1.39[bd]	1.60[abe]	4.56[c]	4.66[c]
SD	1.64	1.11	1.44	2.33	1.19	1.19	3.46	3.15
exp. other								
M	3.29[ad]	4.12[a]	3.45[a]	3.37[ab]	2.04[b]	2.16[bd]	5.47[c]	5.66[c]
SD	2.45	2.72	2.60	2.69	1.80	1.60	3.31	3.03

Note In all cases scale = 1-10, and n = 24.

[y] seriousness = perceived seriousness; normality = perceived normality; exp. own = experience of described behaviour with own child; exp. other = experience of described behaviour with other child.

[abcde] different superscript letter by mean indicate significant differences ($p<.05$)

There was a significant difference in ratings by scenario type for perceived seriousness ($F = 25.27$, $p < .001$), perceived normality ($F = 18.55$, $p < .001$), experience with own child ($F = 4.60$, $p < .01$) and experience with other child ($F = 6.420$, $p < .01$). In all cases, post-hoc tests revealed predicted trends. The two scenarios based upon CD symptoms were both rated as more severe and less normal than were the

four scenarios based upon ODB, which were in turn all rated as more severe and less normal than the remaining two scenarios. In addition, the scenarios based upon OBD and CD symptoms were rated as less commonly encountered by mothers than the other two scenarios, although all behaviours were rated as more common in other peoples' children than in own children.

Given the results of the calibration exercise, the four OBD scenarios ("bike", "book", "lego" and "shop") were selected for use in Study One. These formed the vignettes used in the OWN-CAQ. Instructions preceding the vignette asked the mother to imagine her child in the situation described and to answer the questions that follow. Participants were asked to rate on a scale of 1 - 5:

1. how 'serious' or 'naughty' [they] considered the behaviour to be. This is in order to further validate the calibration exercise and to provide a control, if necessary, for differences in perceived seriousness of different vignettes.
2. how frequently [their child] behaves in this way or a similar way. Again, this is a question is designed to validate the instrument and to ascertain whether the vignettes reflect behaviours that are realistically encountered by mothers in the general population.

Mothers were also asked to provide thoughts on what might be their immediate explanation for the behaviour described and the cause of the son or daughter's behaviour in terms of the five attributional dimensions outlined earlier:

1. internality ("If your son behaved in this way or in similar ways, to what extent do you think that the behaviour would be caused by something specifically to do with your son, rather than something else?"),

2. controllability ("If your son behaved in this way or in similar ways, to what extent do you think that your son would have control over behaving in this way?"),
3. stability (If your son behaved in this way or in similar ways, to what extent do you think that the cause of his behaviour will be present again in the future or was it a 'one-off'?"),
4. universality ("If your son behaved in this way or in similar ways, to what extent do you think that this behaviour is caused by something unique to your son or by something common to most boys of that age?") and
5. globality ("If your son behaved in this way or in similar ways, would the cause influence your son in other situations or would it only influence this sort of situation?")

Following each one of these five attributional ratings the mother to provide more information or to justify her rating (e.g., "what makes you think this?") in order to get a clearer understanding of the potential factors that might be regarded as causally important in the explanation of a child's negative behaviours. In addition, they were intended to see whether there is consistency between the ratings offered on the dimensions and the actual factors the mothers are taking into account.

The Other-Child Attributions Questionnaire (OTHER-CAQ)

This questionnaire is similar in structure and format to the OWN-CAQ, but refers to an other child of approximately the same age as the respondents' own. In addition, respondents are provided with a brief context about the other child. It was decided that a little information about the child's background would serve the purpose of orienting the respondent by presenting a more realistic framework in which

to make judgments about the misbehaviour. That is, mothers wouldn't be reading the vignette "from cold" as it were, but have sufficient information so as to be able to imagine realistically an otherwise purely hypothetical child. Thus, whilst not wanting to provide so much information as to potentially influence the formation of attributions, but at the same time not wanting to present the other child in the total absence of background context, it was decided that a range of family profiles should be created in which to embed the behavioural vignette about the other child.

In order to identify aspects of family background that might characterise common family types, data from an existing study was analysed. This study provided a dataset of 473 mothers from the general population who have a child aged between 9 and 11 years (born 1990-1991), living in the same area, none of whom were invited to take part in the present study. Therefore, it was possible to derive empirically archetypal family profiles by cluster-analysing the parental and contextual data on that group. The following variables were entered into a cluster analysis: mothers' current marital status, change in marital status, occupation of the main earner, unemployment history, total life events, number of children in household and mothers' GHQ score. Results are presented in Table 2.

Table 2

Scores on family variables by cluster

Variable[a]	Cluster 1	2	3	4
n	90	29	21	333
Current Status	.89%	.79%	.43%	.85%
Divorced	11% yes	6% yes	33% yes	6% yes
Occupation	1.51	1.41	1.14	1.35
Unemployment	17% yes	27% yes	23% yes	10% yes
Life Events	1.8	1.8	2.04	1.24
No. of children	2.35	2.31	2.20	1.24
Mother's depression	5	11	19	.35

Note. Total n = 473

[a] variables measured as follows:

Current Status	0 = living alone, 1 = married / cohabiting
Divorced	divorced in last five years?
Occupation	1 = manual job, 2 = non-manual job
Unemployment	main earner unemployed in last five years?
Life Events	count of total life events (e.g., moving house, death)
No. of children	number of children in household
Mother's depression	mother's score on GHQ-30 when child aged 8 years.

The optimum solution was a four-cluster model; the only variable that did not discriminate between families using this model was the number of children in household. Cluster 1 describes a mildly stressed family, with the mother having a relatively low GHQ score, the main earner having experienced a little unemployment, and the family as a whole having an intermediary number of life events. Cluster 2 describes a moderately stressed family, with each variable score being slightly higher, whilst Cluster 3 describes a severely stressed family with the most elevated scores on these variables. In contrast, Cluster 4 represents a happy family,

with variable scores being lower than the other three clusters. On the basis of this information, four family profiles were developed, by inserting a textual definition of the score received in the cluster analysis into the following template[3]:

John is a 9 year old boy who lives at home with his [status score] sister and brother. His mum is [mother's GHQ score] and has had [life events score] in the last few years. [description of job based on occupation score, and mention of any unemployment based upon unemployment score].

The behavioural scenario is presented immediately after the family profile. The scenarios are the same in format and content as those used in the OWN-CAQ with the exception that the behaviour is referring to 'John' or 'Jane' rather than the son or daughter of the respondent. After reading the vignette, mothers are asked to answer the same questions as those presented in the OWN-CAQ as to the seriousness, frequency and causes of John (or Jane)'s behaviour and the ratings on the five attributional dimensions. Each profile is presented in Apendix 4. Versions of the OWN-CAQ and OTHER-CAQ can be found in Appendices 5 and 6 respectively.

Information Sheet

In addition to the questionnaires, mothers are asked to provide relevant background and demographic information about the following factors: marital status; name, sex and date of birth of all people in household; occupation of all adult household members, religious affiliation and unemployment history of the primary household earner over past five years. In addition, a one-item question concerning the relationship

[3] An alternative, but otherwise identical, set of profiles is

the mother has with the target child is presented, asking the mother to give an indication on a scale of 1 - 8 of how close she would say she is to her son or daughter. This is in order to explore the possible impact of relationship satisfaction and attachment style upon any attributional biases. A copy of the information sheet can be found in Appendix 7.

Procedure

Data was collected in two stages. Mothers were first sent 'Pack A'; this comprised the GHQ, the SDQ and either the OWN-CAQ or the OTHER-CAQ. Two weeks after the mother completed and returned Pack A, 'Pack B' is sent. Pack B comprised the information sheet and which ever attributions questionnaire mothers did NOT receive in Pack A. The OTHER-CAQ that mothers received always involved a different behavioural scenario to that presented in the OWN-CAQ. The family profile and gender of child presented in the OTHER-CAQ were randomised across all participants.

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created for 'Jane', the female counterpart to John.

Results

The possible influence of a number of unrelated variables upon general attributional formation was examined in order that potential confounds could be controlled for in the main analyses where necessary. These comprised: sex of child, scenario type, family profile and attachment. Each variable was entered as a between-subjects factor in a oneway ANOVA, with the five dimension scores (internality, controllability, stability, universality and globality) for own child or other child as dependent variables. Results are presented in Appendix 8.

Effect of Attributional Target on Attributional Dimensions

To examine the impact of attributional target (own vs. other) on mothers' attributional ratings, a series of analyses were conducted. Firstly, a 2 (target) x 5 (dimension) within-subjects multivariate analysis of variance (MANOVA) was conducted with the attributional ratings as dependent variables. There was a main effect of attributional target $F(1, 121) = 24.21$, $p<.001$, a main effect of dimension $F(4, 118) = 14.10$, $p<.001$ and a significant interaction between the two $F(4, 118) = 14.35$, $p<.001$. This shows that on some attributional dimensions, mothers rate their own child differently to the other child. To explore where these differences lie, a series of univariate analyses of variance ANOVAs were conducted - one for each attributional dimension. For example, the score for own child and the score for other child on the dimension of internality were entered as dependent variables with attributional target (own child vs. other child) as a within-subjects factor. This was repeated for each dimension. Means and standard deviations are presented in Table 3. A summary of the univariate analyses is presented in Table 4.

Table 3

Scores on dimensions by attributional target

	Own Child[a]		Other Child[a]	
Dimension	M	SD	M	SD
internal	2.91	1.32	2.75	1.29
controllable	3.44	1.21	3.38	1.06
stable	2.36	1.20	3.62	.81
universal	3.20	1.39	3.20	1.25
global	3.36	1.35	3.71	.99

[a] n = 125 for each group

Table 4

Summary of univariate analyses of variance by attributional target for each attributional dimension

		F				
Source	df	Internal	Controllable	Stable	Personal	Global
	within-subjects					
child type	1	.95	.22	89.63***	.00	6.11**
S within-group error	124	(1.68)	(1.16)	(1.11)	(1.27)	(1.21)

Note. Values enclosed in parentheses represent mean square errors.

*p<.05, **p<.01, ***p<.001

There were no main effects of attributional target on the dimensions of internality, controllability or universality. However, causes of behaviour for own children were rated as less stable and less global than those for other children. The plot chart overleaf (Figure 1) illustrates the pattern of effects on the attributional dimensions.

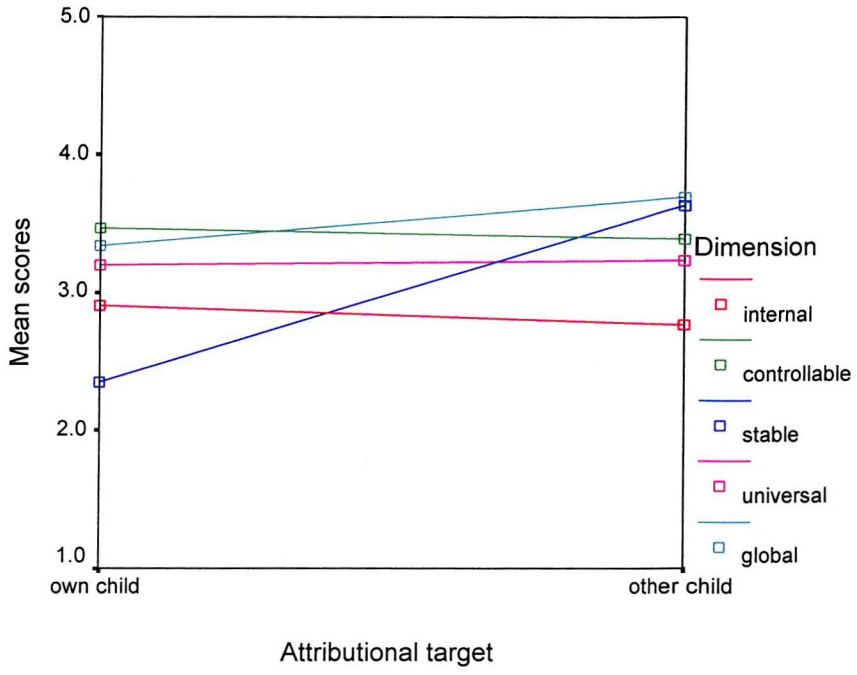


Figure 1. Mean scores for own and other child on each attributional dimension. n=126

Effect of Attributional Target, Mother's Depression and Child's Behavioural Status on Attributional Dimensions

To determine whether mother's depression, child's behavioural status or combined problems influence the effect of attributional target described above, a further series of analyses were conducted.

Firstly, mothers whose GHQ-12 score was above four (cf. Goldberg et al, 1997) were selected from the sample of 125 and classified as cases (n = 39). Secondly, children whose score on the SDQ was 14 or above (cf. Goodman & Scott, 1997) were classified as cases (n = 33). The means and standard deviations are presented in tables 5 and 6 overleaf.

Table 5

Scores on dimensions by attributional target and mother's depression status

	Own child		Other child	
Dimension	below cut off (n = 86) M (SD)	above cut off (n = 39) M (SD)	below cut off (n = 86) M (SD)	above cut off (n = 39) M (SD)
Internal-to-child	2.94 (1.29)	2.70 (1.30)	2.76 (1.34)	2.76 (1.24)
Controllable-by-child	3.47 (1.17)	3.23 (1.25)	3.27 (1.02)	3.56 (1.11)
Stable	2.39 (1.23)	2.78 (1.26)	3.63 (.82)	3.53 (.79)
Universal	3.28 (1.26)	3.29 (1.47)	3.15 (1.23)	3.38 (1.26)
Global	3.24 (1.38)	3.61 (1.26)	3.77 (1.00)	3.58 (.99)

Note. Scales go from 1 - 5.

Table 6

Scores on dimensions by attributional target and child's SDQ status

Dimension	Own child		Other child	
	below cut off (n = 93)	above cut off (n = 33)	below cut off (n = 93)	above cut off (n = 33)
	M (SD)	M (SD)	M (SD)	M (SD)
Internal-to-child	2.95 (1.32)	2.70 (1.19)	2.77 (1.29)	2.75 (1.34)
Controllable-by-child	3.62 (1.13)	2.91 (1.23)	3.35 (1.00)	3.45 (1.22)
Stable	2.23 (1.12)	3.08 (1.31)	3.53 (.78)	3.84 (.87)
Universal	3.31 (1.33)	3.19 (1.34)	3.10 (1.21)	3.48 (1.32)
Global	3.32 (1.38)	3.42 (1.39)	3.73 (.93)	3.63 (1.16)

Note. Scales go from 1 - 5.

These two binary variables were then used as between-subject factors in a 2 (depressed vs. non-depressed) x 2 (difficult vs. not difficult) multivariate analysis of variance (MANOVA), with attributional target (own vs. other) remaining as a within-subjects factor. There remained significant effects of attributional target $F(1, 117)=27.61$, $p<.000$ and dimension $F(4, 114)=9.75$, $p<.000$ and an interaction between the two $F(4, 114)=6.77$, $p<.000$. There were also three-way interactions of target with dimension and GHQ status $F(4, 114)=2.46$, $p<.05$ and target with dimension and SDQ status $F(4, 114)=2.00$, $p<.10$. This means that mothers rated their

own child differently to the other child on some dimensions and that this effect was influenced (i.e., either amplified or reduced) either when the mother was depressed or the child was rated as difficult. There was not a significant four-way interaction, nor any other interactions. In order to understand the pattern of results in the main MANOVA, a series of 2 (target) x 2 (GHQ status) x 2 (SDQ status) MANOVAs were conducted - one for each dimension.

Tabachnick & Fidell (1996) discuss two problems which arise if cells in a factorial design have unequal numbers of scores, as is the case here. Firstly, there is "ambiguity regarding a marginal mean from cells with unequal n. (i.e., is the marginal mean the mean of the means, or is the marginal mean the mean of the scores?)" (p344). Secondly, the design can become nonorthogonal and tests for main effects and interactions no longer remain independent. Following the guidelines set out by Tabachnick & Fidell, there are four possible strategies for addressing these problems, of which two are appropriate for repeated measures MANOVA with between-subjects factors as used here. The first is to assign equal weight to each cell mean regardless of its sample size and the second is to equalise cell sizes by random deletion of cases. The analyses were conducted once using the first strategy and once using the second. Results for the first strategy are presented in Table 7; results for the second in Table 8.

Table 7

Summary of multivariate analyses of variance for attributional target, GHQ status and SDQ status (unadjusted cell size)

Source	df	F				
		Internal	Control	Stable	Personal	Global
	between-subjects					
GHQ status	1	.92	.82	.08	.00	.50
SDQ status	1	.66	3.02	16.83***	.00	.35
GHQ x SDQ	1	.37	.55	.11	1.20	.00
S within-group error	121	(1.76)	(1.39)	(.92)	(2.21)	(1.67)
	within-subjects					
Attributional target (AT)	1	.00	1.25	52.71***	1.09	3.41
AT x GHQ	1	2.00	.83	1.88	.03	5.41*
AT x SDQ	1	.96	5.20*	2.36	2.70	.01
AT x GHQ x SDQ	1	.07	.06	1.77	.18	2.01
AT x S within-group error	121	(1.68)	(1.12)	(1.07)	(1.27)	(1.19)

Note. Values enclosed in parentheses represent mean square errors. S = subjects.

*p<.05, **p<.01, ***p<.001

Table 8

Summary of multivariate analyses of variance for attributional target, GHQ status and SDQ status (adjusted cell size)

Source	df	F				
		Internal	Control	Stable	Personal	Global
	between-subjects					
GHQ status	1	.44	.02	.07	.03	.98
SDQ status	1	.26	6.94**	20.95**	.10	.05
GHQ x SDQ	1	.08	2.89	.05	.52	.06
S within-group error	70	(1.33)	(1.32)	(.80)	(2.34)	(1.59)
	within-subjects					
Attributional target (AT)	1	.04	1.28	45.99***	.05	1.78
AT x GHQ	1	2.13	.54	2.04	.82	3.12
AT x SDQ	1	1.18	3.97*	2.49	5.20*	.17
AT x GHQ x SDQ	1	.001	.90	1.06	1.32	2.53
AT x S within-group error	70	(1.89)	(1.13)	(1.08)	(1.22)	(1.24)

Note. Values enclosed in parentheses represent mean square errors.

S = subjects.

*p<.05, **p<.01, ***p<.001

The main effect of attributional target on the dimension of stability remains; that is own child's negative behaviour is rated as less stable than other child's behaviour. There is also a main effect of child's SDQ status on this dimension - negative behaviour of cases is rated as more stable than of non-cases. There are no interactions of attributional target with GHQ status, SDQ status or the combined interaction term.

The main effect of attributional target on the dimension of globality becomes non-significant (p = .06) when the between-group variables are entered into the MANOVA. There is an interaction of attributional target with GHQ status in the unequalised cell MANOVA; cases rate their own child's behaviour as more global than non-cases. There are no other main effects or interactions.

There are no main effects of attributional target, GHQ status or SDQ status on the dimension of controllability. Attributional target does interact with SDQ status in both analyses - behaviour of cases is rated as less controllable than behaviour of non-cases. There are no other interactions.

The dimensions of internality and universality are not affected by attributional target, GHQ status or SDQ status.

Main Effect Analyses Controlling for Possible Confounds

The preliminary analyses revealed a certain number of influences on attributional ratings, independently of attributional target. If those influences are controlled for, do the effects of attributional target demonstrated on the dimensions of stability and globality disappear?[4] In order to examine this, a number of analyses were conducted once more, introducing the potentially confounding variable as a between-subjects factor where necessary.

One variable that influenced ratings of stability was sex of own child, with boys' behaviour rated as more stable than that of girls. Sex of own child was thus included as a

[4] Please note that only where a variable has revealed an effect on the dimensions of stability or globality in the preliminary analyses are they reconsidered here. Although some variables influenced the other dimensions, they will not be considered here as no effect of attributional target was established for them.

between-subjects variable in a repeated measures MANOVA with attributional target (own vs. other) as a within-subjects factor. The scores on the dimensions for stability were dependent variables. As before, one MANOVA contained unequal cell sizes with unweighted means and one contained equalised cell sizes by random deletion of cases. Results for both analyses showed that the main effect of attributional target remained, with own children's behaviour regarded as less stable than that of other children (unequal cell sizes: $F(1, 123) = 95.99$, $p<.001$. equal cell sizes: $F(1, 110) = 90.746$, $p<.001$), but that this effect was less pronounced for mothers of boys ($F(1, 123) = 4.972$; $p<.03$. equal cell sizes: $F(1, 110) = 4.70$; $p<.04$).

Similarly, attributions about stability for other child were influenced by the family profile in which the vignette was embedded, with behaviour embedded in profile three rated as more stable than that in profile four. As such, mothers receiving a profile three or profile four questionnaire about other children were selected and included in a repeated measures MANOVA with attributional target (own vs. other) as a within-subjects factor, and profile (three or four) as a between-subjects factor. As before, one MANOVA contained unequal cell sizes with unweighted means and one contained equalised cell sizes by random deletion of cases. The scores on the dimensions for stability were dependent variables. Results showed that the main effect of attributional target on ratings of stability remained ($F(1, 59) = 47.188$; $p<.001$. equal cell sizes: $F(1, 50) = 47.473$; $p<.001$)., but interacted only moderately with family profile ($F(1, 59) =$; $p = .08$ns. equal cell sizes: $F(1, 50) = 4.432$; $p<.04$), such that mothers rated behaviours embedded in profile three (severe stress) as more stable than those in profile four (happy).

Ratings of globality for other children were influenced by scenario type, with behaviour presented in "shop" rated as less global than behaviour presented in "book" and "lego". Scenario received on the other questionnaire was thus included as a between-subjects variable in a repeated measures MANOVA with attributional target (own vs. other) as a within-subjects factor. As before, one MANOVA contained unequal cell sizes with unweighted means and one contained equalised cell sizes by random deletion of cases. The scores on the dimensions for globality were dependent variables. Results in both analyses showed that the main effect of attributional target remained ($F(1, 121) = 5.370$; $p<.02$. equal cell sizes: $F(1, 92)= 7.544$; $p<.005$) and did not interact with the behavioural scenario presented in the questionnaire ($F(3, 121) = .733$ $p = .534$ns; equal cell sizes: $F(3, 92)= 3.92$; $p = 2.77$ns).

Finally, preliminary analyses revealed that a higher attachment rating was associated with elevated scores on the dimension of internality and lower scores on the dimension of stability. In order to examine whether the attachment rating is associated with the difference in attributional ratings for own child and other child, a score was created for each dimension that reflects the magnitude of the difference in attributional ratings for own and other child. (This was done by Z-transforming the ratings of internality for own and other child, and then subtracting the latter from the former, repeated for the other four dimensions). These scores were then correlated individually with the attachment rating. No significant correlations were found. This means one of two things; first, that there is no association between how close mothers feels toward their own child and the degree to which they demonstrate favourable explanations of their own child's

behaviour. Alternatively, it means that the measure used was inappropriate or obtained scores so high that a ceiling effect was demonstrated. Further exploration of this variable would resolve this question.

Discussion

A main effect of attributional target on causal explanations for negative behaviours was demonstrated on two attributional dimensions - stability and globality - but not on the dimensions of internality, controllability or universality. Own children's behaviours were rated as less stable and more situation-specific than were equivalent behaviours displayed by other children. When mothers reported elevated symptoms of depression, the tendency to see own child's behaviour as more situation-specific than other children's behaviour was reduced in one analysis, but depression did not significantly affect the magnitude of the difference in scores on the dimension of stability. The difference demonstrated on these two dimensions was not significantly affected by the child's behavioural status. The possible reasons for this difference in causal explanations for own and other children's negative behaviour will now be examined.

We have already seen that the attributional literature identifies the common tendency for people to be biased in their explanations of behaviour. Specifically, when we explain events involving ourselves, we attribute positive outcomes to internal, stable and global causes whereas we attribute negative outcomes to external, unstable and specific causes. This self-serving bias is well documented generally and is also manifested by parents in their explanations of their own child's behaviours. The present study set out to determine whether mothers will attribute about negative outcomes involving their own child (e.g., their negative behaviour) in a similar way to that in which they would attribute about themselves. That is, would they favour their own child when asked to provide reasons for their misbehaviour when compared to that of other children? The results of the present study shows that mothers do

explain their own child's negative behaviour in a more favourable way than that of other children, at least on two dimensions - stability and globality. Therefore, is it possible to conclude that mothers extend the bias that they would demonstrate about their own behaviour to their child? Before answering that question, it is important to understand the possible mechanism by which the self-serving bias operates. The self-threat model of the self-serving bias described earlier (Campbell & Sedikides, 1999) offers an explanation for understanding self-serving attributions following negative personal outcomes. Specifically, individuals are more likely to perceive the cause as external to themselves when threats to positive self-concept are evident. Using this model, Campbell & Sedikides found important moderating variables on this bias to include self-esteem (participants high in self-esteem displayed the self-serving bias significantly more than their low self-esteem counterparts), outcome expectancies (the self-serving bias emerged when participants expected success, but was not present in those expecting failure) and affect (the self-serving bias was more pronounced among participants with positive affect).

This being the case, if the differences demonstrated by mothers in this study are in some way an extension of a self-serving bias to one's own child, one would expect that those variables which influence the manifestation of the self-serving bias may also exert an influence on attributions relating to own child's behaviour. There are two aspects of the results that suggest further evidence is required before a definitive conclusion about that possibility is drawn. First, the effects of depression were less marked than predicted, and second, the dimension of internality, upon

which the self-threat model is based, was not affected. Both of these issues will now be addressed.

The first issue concerns the influence of mother's mental health on the attributional dimensions implicated in a genuine bias. Although not directly a measure of self-esteem, the well demonstrated negative correlation of depression with self-esteem (e.g., see Andrews & Brown, 1993; Brown, Andrews, Harris, Adler & Bridge, 1986) implies that mothers' depression might, at least to some extent, influence the magnitude of any favour demonstrated towards own child, as threat is more marked when self-esteem is positive (i.e., when depression is low). Indeed, mothers who were moderately or severely depressed demonstrated a reduced bias on the dimension of globality, but no such interaction was present for any of the other dimensions. The reasons for this are not clear. The GHQ-12 is not an instrument designed to measure self-esteem and its use as a proxy measure may therefore be conceptually inappropriate. On the other hand, research exploring the differences in attributions for own and other children in this way is novel and unprecedented; whilst the self-threat model may well explain the moderation of a self-serving bias in explanations for one's own behaviour, the influence of self-esteem on the extension of that bias to one's child may be less pronounced. Alternatively, as Johnston (2000, personal communication) suggests, even with low self-concept there may be some motivation to protect one's self-esteem and therefore maybe it is the level of threat to the mother provoked by the situation, rather than the level of self-esteem, that is important. In order to fully understand the association of self-esteem and attributional bias, a measure empirically validated to measure self-esteem should be used.

The second issue that calls into question the self-threat model is the absence of a difference in attributions for own and other children's behaviour on the dimension of internality. The central predication upon which Campbell & Sedikides build the self-threat model is that self-concept is protected by rating causes for negative experiences as more external for self than for others. Following that logic, one would expect that mothers would rate causes for own child's behaviour as more external than for other children whose behaviour, presumably, poses no threat to self-concept. This did not happen, and examination of the mean scores for ratings on that dimension revealed only a marginal trend in that direction (2.72 vs. 2.67 for own and other child respectively). One possible explanation for this is the notion that demonstrating a bias on that dimension (i.e., to rate the cause of the behaviour as more external to own child), by its very nature, increasingly implicates the role of the environment in the causation of the behaviour being explained. One key component of a child's environment is their mother. To exercise a bias that favours the child, therefore, would mean that the mother would be, in effect, implicating herself as potentially responsible for her child's negative behaviour. This would then be at complete odds with the key premise of the self-threat explanation of the self-serving bias - that people primarily attribute in ways that minimise their responsibility for negative events. In short, demonstrating a bias in favour of own child on this dimension would be in direct conflict with demonstrating a bias in favour of self.

This explanation assumes, then, that when the possibility of demonstrating a bias that favours own child <u>in itself</u> threatens the mother's capacity to make a self-serving

attribution, she reverts to rating the event in whichever way reduces her own personal causal role in events. In this case, that would be by rating behaviour as internal to child (thus external to mother) equally often for own child as for other child, hence no bias. Although the present study did not set out to directly test this theory, it is possible to explore its potential value using the justifications mothers were required to provide after each attributional rating. Mothers were asked to provide a text description to explain in more detail the actual causes they were thinking of in their rating. If it is true that mothers offered ratings in ways that minimised their own role in the causation of negative behaviours in their own child, one would expect a bias in the causes that followed the ratings. The causes associated with the other child's behaviour should include more mother-centred causes than those for own child's behaviour. That is, participants should offer more internal-to-mother causes for other child than they do for own child.

One hundred and fifteen mothers offered causes on the OWN-CAQ or OTHER-CAQ on the dimension of internality. Each of these causes was examined and coded as internal-to-mother or external-to-mother by two raters blind to which questionnaire type they were rating (e.g., if the cause offered was "mother's depression", it would be rated as internal to mother; if the cause offered was "child was tired" it would be rated as external to mother). As shown in Table 9, there were an approximately equal number of internal-to-mother and external-to-mother causes offered for other child's behaviour, whereas for own child's behaviour, there was a striking absence of internal-to-mother causes offered.

Table 9

Causes offered for child's negative behaviour on two questionnaires

		Causes on OWN-CAQ		
		internal to mother	external to mother	total
Causes on OTHER-CAQ	internal to mother	4	52	56
	external to mother	0	59	59
	total	4	111	115

Note. OWN-CAQ = Own Child Attributions Questionnaire; OTHER-CAQ = Other Child Attributions Questionnaire

N = 115

A McNemar test revealed that this difference in cell numbers was statistically significant at the .001 level. Participants identified causes for child's negative behaviours that were internal to mothers of other children, but did not identify causes internal to themselves in explaining their own child's negative behaviour. This shows that mothers tend to attribute on this dimension in a way which prohibits them from favouring their own child over an other. The exploratory nature of this post-hoc analysis, however, means that one needs to be cautious in accepting this account and identifies the need for a study that directly compares mother-centred and child-centred attributional ratings, or allows a mother the opportunity to attribute about her role as well as her child's role in behaviours.

A further issue relates to the way in which attributions are formed. Bugental et al., (1998) point out that theoretical models of attribution formation have alternatively been conceptualised as involving (a) memory-dependent knowledge structures or (b) stimulus-dependent appraisal processes. Under some circumstances, parental attributions operate as "aware, reflective, moment-to-moment appraisal processes" and sometimes they depend "primarily upon information available in the immediate interaction context" (p460). They label these different processes as "stimulus-dependent attributions" and "memory-dependent attributional style" respectively, and argue that different methods of assessing parental attributions tap into either or both of these processes. They also point out that the boundary defining these different processes is fuzzy and the interplay between them complex and in need of more illumination. The key question for the present study is whether the differences in attributional ratings for own and other children are a reflection of these different processes, rather than an extension of a self-serving bias to one's child. That is, do mothers rate their own child's behaviour on the basis of historical memory and other children's behaviour on the basis of immediate context? Three features of the results suggest that they might.

Firstly, there is an interaction between attributional target (own vs. other) and child's behavioural status on two attributional dimensions (controllability and universality). Only when one's own child is difficult is their negative behaviour rated as less controllable and less universal than that of other children. This suggests that the mother's experience of difficulties with her own child has influenced her attributional ratings to reflect the history and knowledge she possesses. However, there were no significant

interactions of attributional target with internality, stability and globality - the dimensions implicated in the child-serving bias, leaving some uncertainty over the role that history and knowledge may or may not play in the demonstration of an own-child-serving bias.
Secondly, the preliminary analyses revealed that the behavioural scenario that mothers received ("bike", "book", "lego" or "shop") is more influential when mothers are explaining other children's behaviour. For own children, there is a main effect of scenario type on ratings of universality only. Causes of behaviour described in "bike" and "book" are rated as more universal than those in "lego" or "shop". For other children, there is again a main effect of scenario type on ratings of universality such that causes of behaviour described in "lego" are rated as less universal than those offered in "bike" and "book". However, the dimension of globality is also influenced by scenario type, with causes of behaviour described in "shop" being rated as less global than those offered in relation to "book" and "lego".

The third feature of the results that emphasises the importance of context and knowledge on attributional ratings supports this view. The family profile associated with the other child affected ratings on the dimensions of internality and stability. Mothers receiving a vignette embedded in family profiles two or three ("stressed" families characterised by some maternal depression, some unemployment and maybe experience of divorce or parental separation) were more likely to perceive the causes of behaviour as external to child than were mothers who were presented with profile four (a "happy", well-adjusted family with little experience of unemployment or divorce). In addition, causes of behaviour embedded in profile three (severe stress) were rated as more

stable than those in profile four (happy). In a similar way, the real background and profile of families affected ratings for own child's behaviours. However, the effect in this circumstance was reversed. Mothers with a "stressed" background rated causes of own child's behaviour as more internal to child, whereas mothers from a "happy" background rated the causes as more external to child. What this reversal of effects captures quite eloquently is not only that contextual/historical information is important, but that similar information about family profile and background is used differently depending on whether mothers are explaining their own or other child's behaviour.

Summary and Hypotheses

In summary, the present study has been successful in demonstrating an effect of attributional target on two attributional dimensions, in that negative behaviour exhibited by one's own child is rated as less stable and global than similar behaviours displayed by other children. Whether this is a genuine bias or the result of differential availability of knowledge about the child, or a combination of these factors, is unclear.

The next study aims to clarify this issue. If the difference in attributions offered for own and other child's behaviour is an extension of a favourable bias to one's own child, the self-threat model would predict that low maternal self-esteem may moderate (i.e., reduce) this effect. This is based on the argument that lowered self-esteem reduces the level of threat that negative behaviour would usually instigate to one's self-concept. However, it may be that it is not maternal self-esteem per se that moderates a bias but rather the esteem a mother feels in her parenting role. Mothers reporting feeling satisfied and effective in their role as a

parent may be more likely to feel threatened by their child's negative behaviour as it relates to their identity as a "good mother". This would be less marked in mothers who feel dissatisfied and ineffective in that role. Therefore, one would expect mothers reporting feelings of satisfaction and efficacy as a parent to demonstrate a bias more so than mothers who do not. In exploring that possibility, it is important to control for child's behavioural status which itself covaries with mothers' feelings of satisfaction and efficacy as a parent (Johnston & Mash, 1989). Finally, if the differences in attributions for own and other child are a reflection of an extended self-serving bias, only the dimensions implicated in the manifestation of a self-serving bias should be affected - negative behaviour should be rated as less internal, stable and global for own child (as one would expect from a self-serving bias) but dimensions of controllability and universality should be unaffected (as these do not appear to be affected by a self-serving bias). The possible qualification to this prediction is that mothers may not ascribe increased external-to-child causes for own child more so than for an other child because it may interfere with their need to see any cause as external to themselves. Therefore, ratings of the mother's causal role in their child's negative behaviour as well as the other mother's causal role in the other child's negative behaviour should be compared.

If the differences in the ratings of own child's behaviour compared to an other child's behaviour are a reflection of the differences in knowledge about those two children, there should be no effects of self-esteem or parenting satisfaction and efficacy on the extent of the differences. Furthermore, there is no reason to assume that the dimensions of controllability and universality will not be affected.

Therefore, if the extent of the information that is provided about the other child, their family and background is manipulated, one would expect differences in the attributional ratings made. Specifically, the richer the extent of the information about the other child, the less discrepancy there is between what a mother knows about her own child and an other child, therefore the smaller should be the difference demonstrated on the attributional ratings.

STUDY TWO

Method

Participants

A power calculation based on the effect sizes of the results obtained in Study One (effect size = 1.05), with alpha level of 0.05 and 80% power showed that a sample of 24 participants was required to detect the expected mean differences. Following a successful recruitment exercise, 37 mothers of 9 year old children took part in the study. They were recruited by invitations sent to mothers of every Year 4 child in seven Hampshire schools, selected to reflect a variety in size, location and catchment area. Two schools had very low numbers of children eligible for free school meals (less than 15%), two schools had very high numbers of such children (over 80%) and three schools had between 30% and 65% of children eligible for free school meals. No information regarding the educational level or social class of individual families was received.

46 mothers expressed a willingness to take part in the study, of whom 37 completed all of the required data. Three mothers were not eligible to take part because they had an older child who had been involved in Study One; three did not answer all of the questions during the interview or on the questionnaires and three withdrew from the study after giving their consent due to lack of time. The mean age of the mothers was 36 years and 2 months (range 26 years - 49 years) of whom 30 (81%) were married or living with a partner. The average number of children per household was 2.8 (range 1 - 8), the mean age of the target child was 9 years and 8 months (range 9 years & 2 months - 10 years and 7 months), of whom there were 23 boys (62%).

Materials

Rosenberg Self-Esteem (RSE) Questionnaire (Rosenberg, 1965).

The RSE is a widely used measure of self-esteem or perceived self-worth, consisting of fifteen items to which the participant responds on a four point scale of agreement. Half of the items are expressions of positive self-esteem and half are negative. The scoring procedure takes this into account and half of the items are reverse scored. Low scores indicate high self-esteem. Scores are negatively skewed, that is they tend toward low self-esteem with 20% of their adult respondents having the maximum score of 40. Based on a sample of 1,345 women aged 18 to 65, the mean, mode and standard deviation scores are 34.52; 35 and 4.91 respectively, (Rosenberg, 1989). A copy of this questionnaire can be found in Appendix 8a.

The Strength & Difficulties Questionnaire (SDQ; Goodman, 1997)

The SDQ is a brief behavioural screening questionnaire that can be completed in about five minutes by the parents or teachers of children aged 4 to 16. There is also a child-complete version for over-11's. It is a well validated instrument and has proven to be as effective as both the Child Behaviour Check List (CBCL; Achenbach, 1991) and the Rutter Scales (Elander & Rutter, 1996) in identifying children with clinically significant levels of behavioural disturbance (Goodman, 1997; Goodman & Scott, 1999). As well as its brevity and reliability, the main advantage of this measure is that it includes items pertaining to children's prosocial behaviour. The SDQ asks five questions about the child's prosocial behaviour, alongside four other 5-item

subscales measuring conduct problems, emotional symptoms, hyperactivity and peer relationships. A copy of this questionnaire can be found in Appendix 2.

The Parental Sense of Competence (PSOC) Questionnaire (Johnston & Mash, 1989)

The PSOC is a 17 item self-complete questionnaire comprising two factors: parental satisfaction - an affective dimension reflecting parenting frustration, anxiety and motivation; and parental efficacy - an instrumental dimension reflecting competence, problem-solving ability and capability in the parenting role. It is validated for use with parents of 4-9 year old children (Johnston & Mash, 1989) and has a stable factor structure and excellent validity (Ohan, Leung & Johnston, in press).

A copy of this questionnaire can be found in Appendix 9.

The Modified Own-Child Attributions Questionnaire (OWN-CAQ)

This questionnaire is designed to elicit mothers' explanations for negative behaviours demonstrated by their own child. There is a parallel version designed to elicit explanations for other children's behaviour (the Modified Other-Child Attributions Questionnaire, OTHER-CAQ) which will be described later. It is based on the questionnaire used in Study One, but has been modified to take into account the hypotheses of the present study. Firstly, mothers hear a vignette of negative child behaviour from the interviewer who has instructed them to imagine that the behaviour has been demonstrated by the participant's own child. This vignette is one of the four calibrated vignettes of misbehaviour described and used in Study One. Feedback from mothers in that study reported the child's behaviour to be worrying as it involved public displays of misbehaviour. Most reported that they do not find misbehaviour in the home as bothersome

as that displayed outside of the home, and therefore these behavioural vignettes were included to present behaviours that would threaten the mother's sense of parenting aptitude sufficiently. This is followed by a series of questions that relate to attributional dimensions of internal-to-child, controllable-by-child, stable, universal, global, internal-to-mother and controllable-by-mother. Mothers are asked to rate on a five point scale the extent to which they believe that

1. The behaviour is caused by something specifically to do with their child, rather than something else?
2. Their child would have control over behaving in this way?
3. The cause of their child's behaviour would be present again in the future or whether it was a 'one-off'?
4. This behaviour is caused by something unique to their child or by something common to most children of that age?
5. The cause would influence their child in other situations or whether it would only influence this sort of situation?
6. The behaviour is caused by something specifically to do with them, as the child's mother, or something else?
7. They have any control over their child behaving in that way?

A copy of this questionnaire can be found in Appendix 10.

The Modified Other-Child Attributions Questionnaire (OTHER-CAQ)

This questionnaire is similar in structure and format to the OWN-CAQ, but refers to an 'other' child of approximately the same age as the respondents' own. Again, it is based on the OTHER-CAQ described and used in Study One, but differs in its presentation and the amount of information mothers receive about the other child is systematically varied.

Mothers are asked to listen to a length of interview that is purported to have been conducted one year ago between an interviewer and a mother of a child the same age and sex as their own. It is actually a fabricated interview designed to present different amounts of information to mothers about the other child's family and background. Mothers are told that the interview has been re-recorded by a colleague and myself in order to protect anonymity and confidentiality. They hear the mother on the cassette tape answer a number of questions about the family background and demographics, herself and the child in question. She then goes on to describe an incident of misbehaviour demonstrated by her child the previous week. The incident of misbehaviour that is described is one of the calibrated vignettes described and used in Study One. Then the cassette is stopped and the participant mother is asked to make attributional ratings on the misbehaviour that the fabricated mother has described. There are three versions of the OTHER-CAQ and mothers have to complete all three. They differ in terms of the amount of information that is contained in the interview presented on the cassette. One interview contains very little information about the family background and is characterised by the mother offering short, undetailed answers to the questions posed by the interviewer. This is the 'low information' condition (LOW), and a copy of the transcript can be found in Appendix 11. One interview contains somewhat more information about the family background and is characterised by the mother offering more detailed answers to the questions posed by the interviewer. This is the 'medium information' condition (MED) and a copy of the transcript can be found in Appendix 12. One interview contains more information about the family background and is characterised by the mother offering richer accounts in her answers to the questions posed by the interviewer. This is

the 'rich information' condition (RICH) and a copy of the transcript can be found in Appendix 13.

None of the information presented implicated the child's or mother's role in the child's specific demonstration of misbehaviour; rather it focused on aspects of the family environment. Each condition contained different amounts of information about i) the mother's marital status, ii) the child's age, iii) the employment status of the mother and father, iv) the number of children in the household and v) the mother's general view of her own well-being. Whilst the information presented in each condition was factually identical (i.e., all the mothers were married; all the children were aged nine and a half years; the father worked full time and the mother part time; the child had two siblings and mothers reported feeling generally happy in themselves), the amount of information used to convey these facts was low, medium or high according to the information condition being presented.

Different colleagues were used to record different versions of the interviews so that the participant mother did not hear the same person being interviewed twice.

Information Sheet

In addition to the questionnaires, mothers are asked to provide relevant background and demographic information about the following factors: marital status; name; sex and date of birth of all people in household; occupation of all adult household members and unemployment history of the primary household earner over past five years. A copy of the information sheet can be found in Appendix 14.

Procedure

Data was collected during a visit to the participant's home. Mothers were read a preamble outlining the aims of the research, and instructions on what was required of them (please see Appendix 15). Mothers were presented the four attributions questionnaires, one at a time, in an order counterbalanced for information condition and behavioural vignette described, according to the design in Figure 2. Mothers were assigned to one of the four presentation orders to balance the distribution of participants across the four presentations.

		Behavioural Vignette			
Presentation		**Bike**	**Book**	**Lego**	**Shop**
1		Own	Low	Med	Rich
2	**Information**	Rich	Own	Low	Med
3	**Condition**	Med	Rich	Low	Own
4		Low	Med	Rich	Own

Figure 2. Counterbalancing of presentation of attribution questionnaires

After the presentation of each cassette recording or, in the case of the OWN-CAQ, the described behavioural vignette, mothers were told that they were to answer a number of questions (see below). They were also informed that they could ask any questions they chose about the mother or child in the interview in order to aid them in their answers. These questions would be answered (unknown to the participant) according to which information condition was being presented. In essence, the answers to the questions would simply re-state the content of the scripted interview in other words.

For example, no answers were given in the 'low' condition - mothers were simply informed that the information was not available. Answers to questions asked in the 'medium' condition were answered with some detail, according to the script of the fabricated interview (please see appendix 12). Questions in connection with the 'rich' condition were given fuller answers, again on the basis of the scripted information (please see appendix 13). All of the answers to questions were therefore designed to ensure that the condition manipulation remained valid. For example, a mother in the medium condition could not receive answers to questions that would provide her with as much information received in the 'rich' condition. This whole process was included in order to enhance the information manipulation presented during the fabricated interviews described above. However, in practice, mothers asked few questions about any of the fabricated interviews - most answered the questions solely on the basis of what they had heard on the cassette tape.

After the instructions, mothers were asked to provide the same ratings as for the OWN-CAQ, with the alteration that the focus was on the child or mother being presented via the cassette tape rather than themselves or their own child. For example, mothers are asked to rate on a five point scale the extent to which they believe that

1. The behaviour described was caused by something specifically to do with the [other] child, rather than something else?
2. The child would have control over behaving in this way?
3. The cause of the child's behaviour would be present again in the future or whether it was a 'one-off'?

4. This behaviour is caused by something unique to the child or by something common to most children of that age?
5. The cause would influence the child in other situations or whether it would only influence this sort of situation?
6. The behaviour is caused by something specifically to do with the child's mother, or something else?
7. The child's mother has any control over the child behaving in that way?

All of the information provided by the mother was recorded by the interviewer onto a set of corresponding questionnaires, which can be found in Appendix 16. When these had been completed, the mother was asked to complete the three questionnaires about herself and the target child. These comprised the RSE, SDQ and PSOC questionnaires. When the mother had completed the questionnaires, she returned them to the interviewer in a sealed envelope. Finally, the mother was thanked for her time and given the opportunity to ask any further questions about the study or further information.

Results

Effect of Information Condition on Attributional Dimensions

To examine the impact of information condition (own (OWN); other low context (LOW); other medium context (MED); other rich context (RICH)) on mothers' attributional ratings, a series of analyses were conducted. Firstly, a 4 (information condition) x 7 (dimension) repeated measures MANOVA was conducted. There was no main effect of information condition $F(3,34)=.08$, ns; there was a main effect of dimension $F(6,31)=11.62$, $p<.01$ and an interaction between information condition and dimension $F(18,19)=4.51$, $p<.01$. This means that on some attributional dimensions, mothers were reporting differently according to the amount of information presented in the experimental situation.

In order to establish which attributional dimensions are affected by information condition and which information conditions differ, further analyses were conducted. Each attributional dimension provides four dependent variables - a score for own child and a score for an other child in three contexts. These ratings were entered as dependent variables, in a repeated measures analysis of variance (ANOVA), with information condition as a within-subjects factor, for each of the seven attributional dimensions. Means and standard deviations are presented in Table 10. A summary of the ANOVAs is presented in Table 11. A plot chart (Figure 3) illustrates the pattern of effects immediately after the statistical analyses.

Table 10

Scores on dimensions by information condition

Dimension	OWN	LOW	MED	RICH
	M (SD)	M (SD)	M (SD)	M (SD)
Internal-to-child	3.38 (1.69)	2.35 (1.55)	2.16 (1.28)	2.13 (1.45)
Controllable-by-child	3.81 (1.54)	3.40 (1.74)	3.11 (1.66)	3.08 (1.67)
Stable	2.00 (1.49)	4.27 (1.21)	4.27 (1.21)	4.35 (1.08)
Universal	3.73 (1.52)	3.62 (1.55)	3.89 (1.52)	3.67 (1.51)
Global	2.59 (1.53)	3.94 (1.39)	4.22 (1.00)	4.29 (1.05)
Internal-to-mother	4.18 (1.22)	3.22 (1.53)	3.43 (1.62)	3.49 (1.57)
Controllable-by-mother	4.05 (1.45)	3.18 (1.57)	3.08 (1.55)	2.89 (1.55)

Note. Scales go from 1 - 5. OWN = own child; LOW = low information condition; MED = medium information condition; RICH = rich information condition. M = mean score, SD = standard deviation

n = 37 for each group

Table 11

Summary of univariate analyses of variance for information condition on each dimension

		F						
Source	df	Internal-to-child	Controllable-by-child	Stable	Personal-to-child	Global	Internal-to-mother	Controllable-by-mother
		within-subjects						
information condition	3	5.83***	2.50	33.59***	.259	14.44***	3.14*	5.20**
S within-group error	108	(2.20)	(1.70)	(1.45)	(1.95)	(1.61)	(2.09)	(1.89)

Note. Values enclosed in parentheses represent mean square errors. S = subject.

*p<.05, **p<.01, ***p<.001

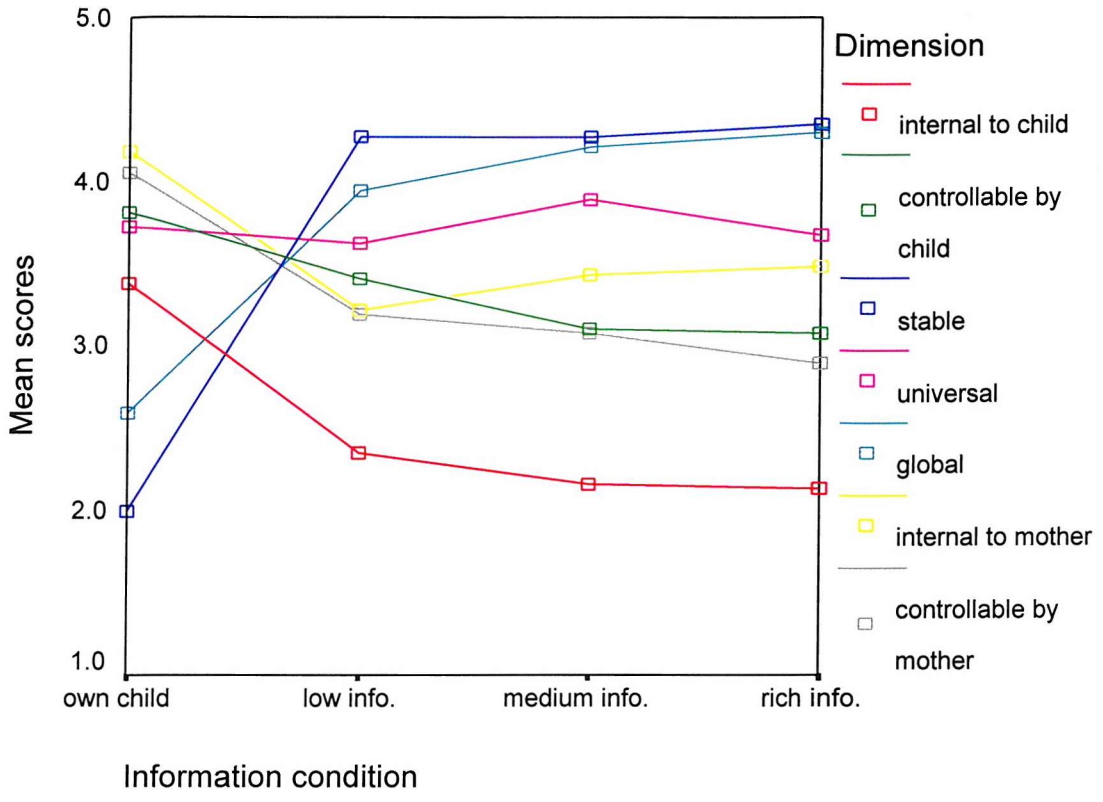


Figure 3. Effect of information condition on attributional dimensions

Attributions about Child's Causal Role in Behaviour

There were no main effects of information condition on the dimensions of controllable-by-child and personal-to-child. However, there were main effects on the dimensions of internal-to-child, stable and global. Post-hoc tests (adjusted with Bonferronni correction) revealed a consistent pattern across these dimensions. The cause of own child's behaviour was regarded as significantly less internal, less stable and less global than that of the other children in any of the three information conditions involving another child.

Attributions about Mother's Causal Role in Behaviour

There were main effects of information condition on both of the dimensions indicating the mother's causal role in child's behaviour. Mothers' ratings of their own child's difficult behaviour were less internal-to-mother and more controllable-by-mother than the ratings offered for any of the other child's behaviour, regardless of context. That is, the causes of other children's behaviour were regarded as more influenced and less controllable by the other child's mother than ratings for self and own child.

Given the significant difference between ratings for own child and other children and the absence of significant differences between ratings for the low, medium and rich contexts, an aggregated 'other child' score was calculated. This was done by combining the rating scores of the low, medium and rich context situations for each attributional dimension (internal-to-child; controllable-by-child; stable; personal-to-child; internal-to-mother; controllable-by-mother), then dividing it by the number of other child information conditions (three). This created seven new variables that indicate the aggregated rating for an 'other' child. The present results show that mothers' scores will differ according to whether they are explaining their own child's or an other child's difficult behaviour (regardless of the amount of information presented in association with that other child).

In order to confirm that the effects of the above analyses remained after having aggregated the other child scores, the analysis was conducted again using the combined 'other child' scores. A 2 (target: own or other child) x 7 (dimension) MANOVA yielded significant results exactly as described above, showing

no main effect of target F(1, 36)=.164, p=.68ns, a main effect of dimension F(6, 31)=5.58, p<.01 and an interaction between target and dimension F(6, 31)=8.47,p<.01. As above, subsequent univariate ANOVAs showed that the differences are on the dimensions of internal-to-child, stable, global, internal-to-mother and controllable-by-mother. These effects are illustrated in Figure 4.

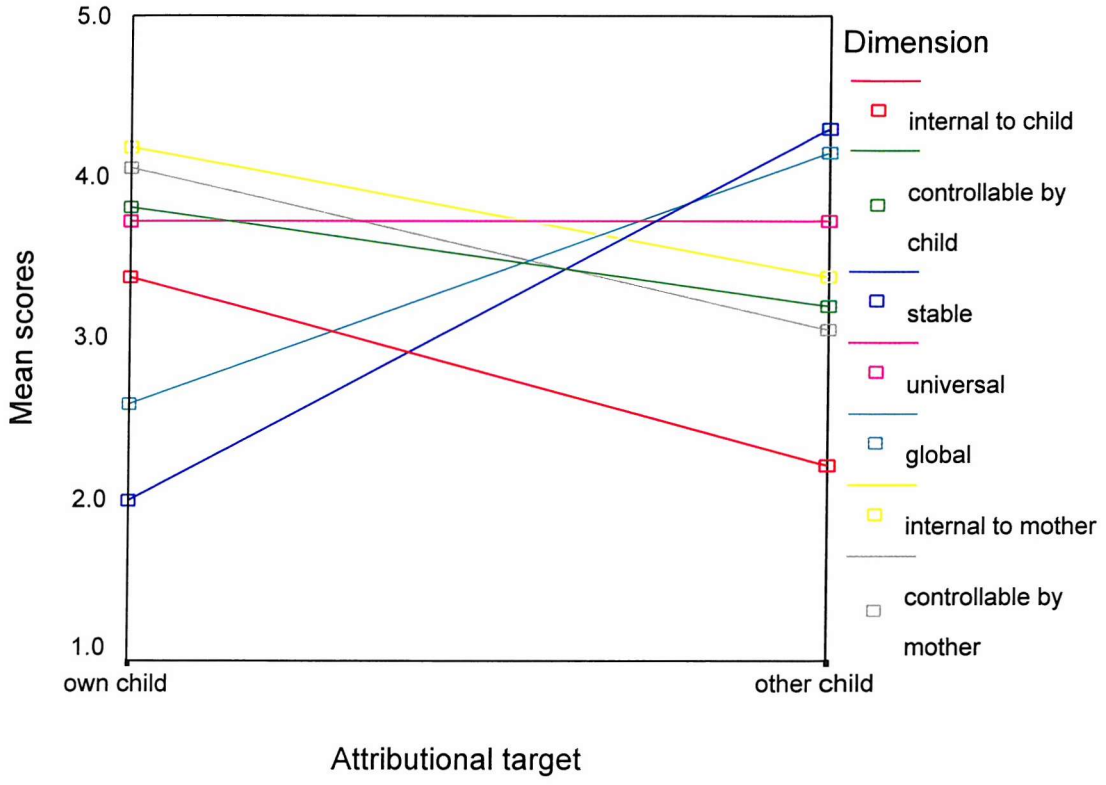


Figure 4. Effect of attributional target on attributional dimensions

Effect of Mother's Self-Esteem on Mean Differences in Attributional Dimension Scores

To determine whether mother's self-esteem influences the magnitude of the differences in attributions offered for one's own and an other child, a further series of analyses were conducted. Firstly, a binary variable of self-esteem was created by performing a median split on the scores mothers had obtained on the Rosenberg Self Esteem (RSE) questionnaire. Means and standard deviations for own and other child by self-esteem status are presented in Table 12. This binary variable was then used as a between-subject factor in a multivariate analysis of variance (MANOVA) with attributional target (own or other child) and dimension remaining as within-subject variables. Because there is an association between maternal self-esteem and child's behavioural status (see Ohan et al., in press) and this trend was evident in the present sample (N=37, r = -.290, p<.08), own child's SDQ total score was entered as a covariate in the analysis.

Table 12

Means and standard deviations of attributional dimension scores by mother's Self-Esteem (S-E) status

Dimension	Own child		Other child	
	Low S-E	High S-E	Low S-E	High S-E
	M (SD)	M (SD)	M (SD)	M (SD)
Internal-to-child	3.45 (1.71)	3.26 (1.70)	2.12 (0.63)	2.35 (1.00)
Controllable-by-child	3.54 (1.68)	4.20 (1.26)	3.22 (1.20)	3.15 (1.51)
Stable	1.86 (1.24)	2.20 (1.82)	4.22 (0.91)	4.40 (0.77)
Universal	3.68 (1.61)	3.80 (1.42)	3.62 (0.98)	3.88 (0.98)
Global	2.59 (1.62)	2.60 (1.45)	4.16 (0.65)	4.13 (0.69)
Internal-to-mother	4.40 (0.96)	3.86 (1.50)	3.27 (1.07)	3.53 (1.05)
Controllable-by-mother	4.31 (1.21)	3.66 (1.71)	3.24 (1.08)	2.77 (1.15)

Note. n = 22 for Low Self-Esteem (S-E) group and 15 for High Self-Esteem (S-E) group. M = mean score SD = standard deviation

The MANOVA yielded a main effect of dimension $F(6,30)=5.09, p<.01$ and a significant interaction between dimension and target $F(6,30)=7.78, p<.01$. There was not a main effect of self-esteem $F(1,35)=.003, p=.95$ ns and self-esteem did not interact with dimension $F(6,30)=.100, p=.44$ ns or target $F(1,35)=.210, p=.65$ ns. The three way interaction was not significant $F(6,30)=.915, p=.49$ ns. This means that mothers' self-esteem

status does not moderate the extent to which attributions for own child's behaviour differ to attributions for other child's behaviour.

One issue with using multivariate analysis in this way is that although one can examine interactive effects, MANOVAs do not take into account the variance in scores of the measure predicted to influence the dependent variables. For example, in this case, the binary measure of self-esteem was predicted to interact with mothers' demonstration of the attributional bias as a between-subjects factor. No such effect was found. However, in order to take account of the variance in mothers' self-esteem scores and to examine whether mothers' self-esteem predicts the magnitude of the attributional bias (e.g., the higher the mother's self-esteem, the greater the extent of the attributional bias she demonstrates), further analysis can be conducted using regression analyses. In order to do this, one needs to create a score that reflects the mean difference in ratings for own child and other child. This index score needs to be calculated for each attributional dimension so that they can be subsequently used as dependent variables in regression analyses. Therefore, in order to get this index score, the rating score on the dimension of internal to other child was subtracted from the rating score on the same dimension for own child. This process was repeated for the other six dimensions.

A series of hierarchical regression analyses were performed. Entering the mean difference score on the dimension of internality as the dependent variable, the child's SDQ total score as the first predictor (Step 1) and the child's SDQ total and the mother's RSE total score as the second set of predictors (Step 2), there were no significant effects on the R squared or

F changes. That is, neither the child's SDQ score, nor that status in combination with the mother's RSE score predicted a significant change in the difference in ratings on the dimension of internality. The analyses were repeated substituting the dependent variable with each of the mean difference scores on the attributional dimensions. Significant results were found on three dimensions - globality, internal-to-mother and controllable-by-mother. Child's total SDQ score predicted a significant amount of the variance on these three dimensions. As child's SDQ score increased, the extent to which mothers regarded their own child's behaviour as specific, internal-to-mother and controllable-by-mother decreased. A summary of each analysis is presented in Appendix 17.

Effect of Mother's Parenting Efficacy on Mean Differences in Attributional Dimension Scores

To determine whether mother's sense of parenting efficacy influences the magnitude of the differences in attributions offered for one's own and an other child, a further series of analyses were conducted. Firstly, a binary variable of parenting efficacy was created by performing a median split on the scores mothers had obtained on the Efficacy scale of the Parental Sense of Competence (PSOC) questionnaire. Means and standard deviations for own and other child by efficacy status are presented in Table 13. This binary variable was then used as a between-subject factor in a multivariate analysis of variance (MANOVA) with attributional target (own or other child) and dimension remaining as within-subject variables. Because there is an association between maternal sense of parenting efficacy and child's behavioural status (see Ohan et al., in press) and this trend was evident in the present sample (N=37, r = -.290,

p<.08), own child's SDQ total score was entered as a covariate in the analysis.

Table 13

Means and standard deviations of attributional dimension scores by mother's Efficacy (Eff) status

Dimension	Own child		Other child	
	Low Eff	High Eff	Low Eff	High Eff
	M (SD)	M (SD)	M (SD)	M (SD)
Internal-to-child	3.18 (1.84)	3.66 (1.44)	2.28 (0.83)	2.11 (0.76)
Controllable-by-child	3.95 (1.49)	3.60 (1.63)	3.06 (1.40)	3.40 (1.19)
Stable	1.77 (1.37)	2.33 (1.63)	4.28 (0.91)	4.31 (0.79)
Universal	3.59 (1.56)	3.93 (1.48)	3.59 (0.90)	3.93 (1.07)
Global	2.77 (1.57)	2.33 (1.49)	4.04 (0.76)	4.31 (0.46)
Internal-to-mother	3.95 (1.39)	4.53 (0.83)	3.53 (1.02)	3.15 (1.10)
Controllable-by-mother	3.90 (1.65)	4.2 (1.09)	2.95 (1.26)	3.20 (0.90)

Note. n = 22 for Low Efficacy (Eff) group and 15 for High Efficacy (Eff) group. M = mean score SD = standard deviation

The MANOVA yielded a main effect of dimension $F(6,30)=5.08$, $p<.01$ and a significant interaction between dimension and target $F(6,30)=7.92$, $p<.01$. There was not a main effect of efficacy $F(1,35)=1.47$, $p=.23$ns and efficacy did not interact with

dimension $F(6,30)=.399, p=.874$ ns or target $F(1,35)=.400, p=.53$ ns. The three way interaction approached significance $F(6,30)=2.22, p=.06$. This means that mothers' efficacy status does not significantly moderate the extent to which attributions for own child's behaviour differ to attributions for other child's behaviour.

For the reasons described above (see p.83), a series of hierarchical regression analyses were also performed. Entering the mean difference score on the dimension of internality as the dependent variable, the child's SDQ total score as the first predictor (Step 1) and the child's SDQ total and the mother's Efficacy total score as the second set of predictors (Step 2), there were no significant effects on the R squared or F changes. That is, neither the child's SDQ score, nor that status in combination with the mother's Efficacy score predicted a significant change in the difference in ratings on the dimension of internality. The analyses were repeated substituting the dependent variable with each of the mean difference scores on the attributional dimensions. Significant results were found on three dimensions - globality, internal-to-mother and controllable-by-mother. Child's total SDQ score predicted a significant amount of the variance on these three dimensions. As child's SDQ score increased, the extent to which mothers regarded their own child's behaviour as specific, internal-to-mother and controllable-by-mother decreased. A summary of each analysis is presented in Appendix 18.

Effect of Mother's Parenting Satisfaction on Mean Differences in Attributional Dimension Scores

To determine whether mother's sense of parenting satisfaction influences the magnitude of the differences in attributions offered for one's own and an other child, a further series of analyses were conducted. Firstly, a binary variable of parenting satisfaction was created by performing a median split on the scores mothers had obtained on the Satisfaction scale of the Parental Sense of Competence (PSOC) questionnaire. Means and standard deviations for own and other child by Satisfaction status are presented in Table 14. This binary variable was then used as a between-subject factor in a multivariate analysis of variance (MANOVA) with attributional target (own or other child) and dimension remaining as within-subject variables. Because there is an association between maternal sense of parenting efficacy and child's behavioural status (see Ohan et al., in press) and this trend was evident in the present sample (N=37, r = -.290, p<.08), own child's SDQ total score was entered as a covariate in the analysis.

Table 14

Means and standard deviations of attributional dimension scores by mother's Satisfaction (Sat) status

Dimension	Own child		Other child	
	Low Sat	High Sat	Low Sat	High Sat
	M (SD)	M (SD)	M (SD)	M (SD)
Internal-to-child	3.05 (1.80)	3.72 (1.52)	2.40 (0.82)	2.01 (0.74)
Controllable-by-child	3.89 (1.55)	3.72 (1.56)	3.29 (1.34)	3.09 (1.32)
Stable	2.31 (1.66)	1.66 (1.23)	3.94 (0.99)	4.66 (0.45)
Universal	4.15 (1.34)	3.27 (1.60)	3.84 (0.84)	3.61 (1.11)
Global	2.84 (1.50)	2.33 (1.57)	4.01 (0.62)	4.29 (0.69)
Internal-to-mother	3.94 (1.31)	4.44 (1.09)	3.70 (0.93)	3.03 (1.10)
Controllable-by-mother	3.73 (0.97)	4.38 (0.97)	3.17 (1.13)	2.92 (1.12)

Note. n = 19 for Low Satisfaction (Sat) group and 18 for High Satisfaction (Sat) group. M = mean score SD = standard deviation

The MANOVA yielded a main effect of dimension $F(6,30)=5.55, p<.01$ and a significant interaction between dimension and target $F(6,30)=10.30, p<.01$. There was not a main effect of satisfaction $F(1,35)=.392, p=.53$ ns and satisfaction did not interact with dimension $F(6,30)=.708, p=.64$ ns or target $F(1,35)=.066, p=.79$ ns. The three way interaction of target, dimension and satisfaction status was significant $F(6,30)=2.73, p=.03$. This means that

mothers' satisfaction status does moderate the extent to which attributions for own child's behaviour differ to attributions for other child's behaviour on some dimensions.

To explore where these differences lie, a series of univariate analyses of variance were conducted - one for each attributional dimension. For example, the score for own child and the score for other child on the dimension of internality were entered as dependent variables with attributional target (own child vs. other child) as a within-subjects factor and mother's satisfaction status as a between subjects factor. Child's SDQ status was again included as a covariate. This was repeated for each dimension. A summary of these univariate analyses are presented in Table 15. Boxplots (Figures 5 and 6) illustrate the pattern of effects immediately after Table 15.

Table 15

Summary of seven univariate analyses of variance for differences in attributional scores by attributional target and mother's Satisfaction (Sat) status

Source	df	F						
		Internal-to-child	Controllable-by-child	Stable	Personal	Global	Internal-to-mother	Controllable-by-mother
between-subjects								
Sat status	1	.19	.22	.02	2.80	.17	.11	.37
S within-group error	35	(1.95)	(3.02)	(1.38)	(2.03)	(1.42)	(1.18)	(1.99)
within-subjects								
Attributional target (AT)	1	17.28***	5.82*	70.67***	0.00	33.25***	9.58**	14.09***
AT x Sat status	1	3.47	0.04	6.16**	1.75	2.09	4.69*	2.79
AT x S within-group error	35	(1.48)	(1.19)	(1.40)	(1.11)	(1.36)	(1.32)	(1.34)

Note. Values enclosed in parentheses represent mean square errors. S = subjects. Sat = Maternal Satisfaction

*p<.05, **p<.01, ***p<.001

n = 37 in all analyses

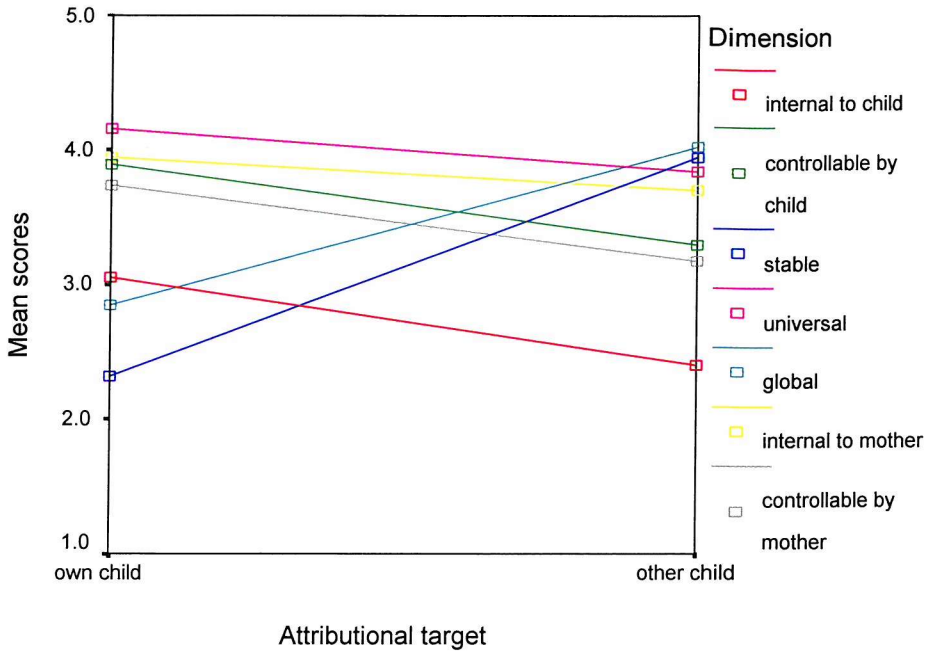


Figure 5. Effect of attributional target on attributional dimensions when Satisfaction status is low

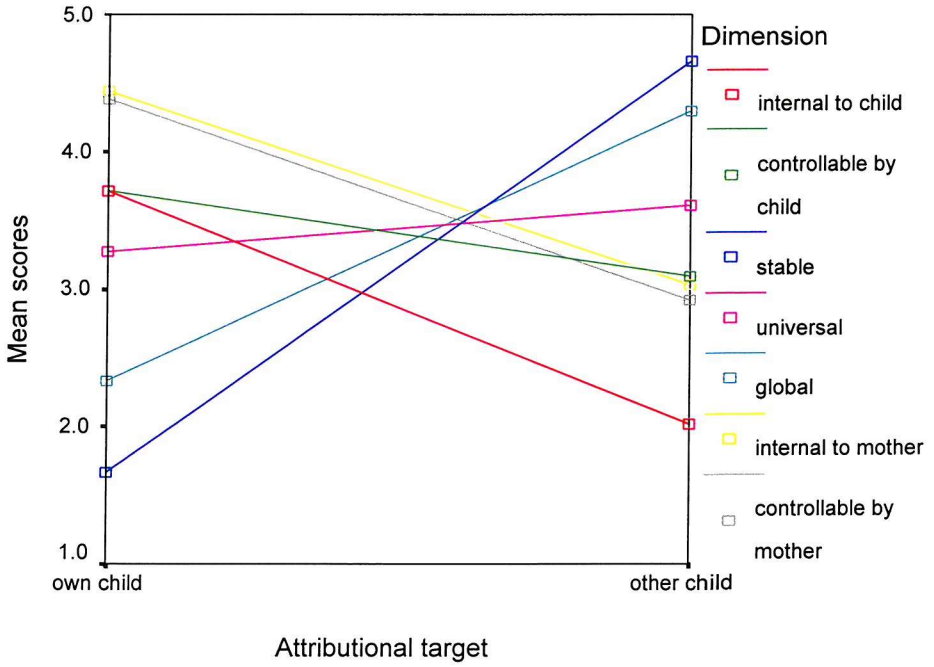


Figure 6. Effect of attributional target on attributional dimensions when Satisfaction status is high

The analyses and Figures 5 and 6 identify a number of significant main effects and interactions. There are main effects of attributional target on all dimensions except universality. These replicate those described previously when no between-subjects variables were included in the analyses (pages 78-81). There are interactions of attributional target with mothers' satisfaction status on the dimensions of stability and internality-to-mother. Mothers who are more satisfied rate the causes of their child's behaviour as less stable and more external to themselves. That is, mothers' satisfaction moderates the demonstration of an attributional bias. There are no main between-subjects effects of mother's sense of parenting satisfaction.

Discussion

A main effect of attributional target on causal explanations for negative behaviours was demonstrated on five attributional dimensions - internal-to-child, stable, global, internal-to-mother and controllable-by-mother. No main effects of attributional target were demonstrated on the attributional dimensions of controllable-by-child or universality. Own child's negative behaviours were rated as less internal, less stable, less global, less internal-to-mother and less controllable-by-mother than other child's negative behaviour. This pattern was demonstrated regardless of the information presented in association with the other child's behaviour.

There were no between-subjects effects of mother's self-esteem or sense of parenting efficacy on any of the attributional dimensions. However, some regression analyses revealed an effect of child's behavioural status on the difference between scores for own and other child's ratings. Specifically, as mothers increasingly report their child's behaviour as difficult to manage so they rate the cause of their child's misbehaviour as more global, less internal and less controllable by themselves. There were interactions of attributional target with mothers' sense of parenting satisfaction. Less satisfied mothers showed a reduced attributional bias on the dimensions of stable and internal-to-mother.

These results support and confirm the results of Study One described earlier, in which an effect of attributional target was demonstrated on the dimensions of stability and globality. Mothers in the present study also demonstrated an effect of attributional target on the dimensions of internal-to-child and internal-to-mother. In keeping with the argument presented in

the previous discussion (see page 61), this is because mothers are able to make an attribution about their child's behaviour that need not conflict with the need to make a self-serving attribution. That is, mothers are at liberty to say that their own child's behaviour is caused by something external to the child whilst at the same time also being able to say it is caused by something external to themselves. When provided with such an opportunity, mothers demonstrated an effect of attributional target regarding their own, as well as their child's causal role in the misbehaviour, in the direction predicted by the hypotheses.

The results of the present study indicate that mothers show a difference in the way that they understand and/or explain negative behaviours demonstrated by children, according to the status of the relationship they have with a given child (own child vs. other child). It is postulated that this difference is an extension of the self-serving bias to one's own child (i.e., a "child-serving bias"), which operates by means of a protective mechanism arising from the mother-child relationship. It is not an artefact of the differences in information mothers have about their own and other children. There are two striking results from the present study that would support such a view; first, only the dimensions implicated in the self-serving bias literature are affected by attributional target, and second, there is no effect of information on the attributional ratings for other child. Each of these issues will now be considered in turn.

Mothers in the present study suggested that when their child displayed negative or difficult-to-manage behaviours, the cause was external to their child, unstable - that is not likely to

occur again in the future - and specific, i.e., only likely to happen in this one situation. Typical examples of causes offered were "the other children were obviously quite nasty to him on that particular day" or "she had a supply teacher that day who wasn't very good". When mothers were explaining the negative behaviours demonstrated for other children, the causes of the behaviour were rated as more internal to the child, more stable and more global. Such explanations would consist of causes such as "it sounds like that child is just wanting his own way all the time" and "she obviously is just a bad-tempered girl who can't co-operate with people". These responses bear a close resemblance to what happens when people talk about their own causal role in events - where negative events are attributed to external, unstable and specific causes for self and internal, stable and global causes for others. This is the self-serving bias (SSB) and is well documented in the social psychological literature (for a review of studies that establish the viability and pervasiveness of the SSB, see Campbell & Sedikides, 1999). The two dimensions not implicated in this bias are controllability and universality. In the results presented here, as well of those in the previous study, there is no effect of attributional target on the attributions of controllability and universality. The specificity of the effect of attributional target lends weight to the notion that mothers are exhibiting a child-serving bias. In fact, if one looks at the mean scores on the dimension of universality, they are all approaching a score of about 4 for both own and other child. The scale goes from 1 to 5, so this score indicates that mothers regard the cause of the behaviour as "common to most children of that age", rather than "something personal or unique to this child". However, having said that the cause is universal rather than personal, mothers then go on to rate the cause for their own child as

external, unstable and specific compared to the cause of the other children's behaviour. This discrepancy in itself supports the idea of a child-serving bias.

The second strand of evidence for the notion of a child-serving bias is that there was no effect of information on the magnitude of the discrepancy between explanations for own and other children's behaviour. In the previous discussion (p81), it was argued that the difference in the information mothers have about their own and other children might govern the difference in their explanations of their misbehaviour. As such, if one manipulates the extent of the information that is provided about the other child, their family and background, one would expect differences in the attributional ratings made. Specifically, it was argued, the richer the extent of the information about the other child, the less discrepancy there is between what a mother knows about her own child and an other child, therefore the smaller the difference that should be demonstrated on the ratings.

The results show that the additional information that mothers had about the other child in the 'medium' and 'rich' conditions of the other-child questionnaire had no significant impact upon the difference in ratings for own and other child. In fact, an examination of the mean scores on the attributions affected by attributional target shows a reversal of that prediction. The more information the mothers have about the other child, the more internal, stable and global is the cause of the negative behaviour rated. The behaviour of the child in the other 'rich' condition is rated as the most different to that of the mother's own child.

Taken together, the results support the view that mothers display a child-serving bias that favours their own child in the same way that they would favour themselves in the explanation of their own negative behaviour. It is argued that this bias is governed by a protective mechanism rather than an artefactual or informational one. However, there are a number of issues that require attention before one can accept such a conclusion with confidence.

The first issue is concerned with the validity of the manipulation intended to ascribe different information to the other children in the 'low', 'medium' and 'rich' conditions of the other-child attributions questionnaire. That is, did mothers feel more informed about the child in the 'rich' condition than they did about the child in the 'medium' and 'low' conditions? Unfortunately, there was no formal measure taken to assess the extent to which mothers felt informed about the other child in each of the three conditions and that is a shortcoming of the study. However, it is possible to attain a proxy indicator of how informed mothers felt by assessing the number of questions they asked about the child, their family or background in each of the conditions. The mean number of questions asked in each of the conditions was: 'low' 5.13 (standard deviation = 2.71); 'medium' 3.64 (standard deviation = 2.43); 'rich' 2.43 (standard deviation = 2.43). A oneway analysis of variance (ANOVA) on these group means shows that mothers asked significantly fewer questions in the rich condition than in the medium or low and significantly more in the medium than the low condition ($F(2, 35) = 13.29$, $p<.001$). The answers given to the greater number of questions in the 'low' condition did not counteract the initial context manipulation because of the care taken in the protocol to match the information in the answers to the originally

presented material. Therefore, one might conclude that mothers did feel more informed, or at least less in need to ask informational questions, in the contexts where additional information had been provided.

The second issue is related to the first and is concerned with the extent to which the informational manipulation provided a suitable comparison between the own and other children. That is, even if mothers did feel significantly more informed about the child in the 'rich' condition, was the amount of information they had anywhere near the amount of information mothers have about their own child? It could be that there are differences between the low, medium and rich contexts of the other child, but that these are so different from the context of the own child than any effects of context or information would be lost. A similar 'anchoring' effect has been found in other research on parental attributions. Johnston et al., (1994) found that when asked to explain AD/HD behaviours vs. oppositional defiant (OD) behaviours in children, mothers do make a distinction in their attributional ratings between these two behaviours. However, when asking mothers to explain AD/HD vs. OD vs. prosocial behaviours, the distinction between the AD/HD and the OD behaviours is lost. In a sense, they are merged by the mother as the 'negative' behaviours and become the combined comparator to the positive behaviours. In the present study, mothers may have 'anchored' their explanations on the negative behaviour of their own child such that all other children's behaviour will be rated "as one". Even intuitively, one might argue that no amount of information provided in the context of an attributions questionnaire will enable a mother to feel as informed about an other child in a way which sufficiently compares to her knowledge of her own child.

This relates to the third issue, which is concerned with the type of information that mothers were provided with in the three conditions of the other-child attributions questionnaire. The aim of the present study was to establish whether it is the amount of information that mothers hold about their own child that determines the attributions they make for their misbehaviour and which makes them different to those offered for other children's behaviour. By manipulating the amount of information available to mothers about an other child, one should be able to determine the impact information has on attributions. Indeed the present study found that mothers would attribute differently about their own child, regardless of how much information they had about other children. However, the original premise for introducing this manipulation was on the basis of Bugental et al's., (1998) distinction between "stimulus-dependent attributions" and "memory-dependent attributional style" described earlier (p62). The key question for the present study was whether the differences in attributional ratings for own and other children is a reflection of these different processes, rather than an extension of a self-serving bias to one's child. That is, are mothers rating their own child's behaviour on the basis of historical memory and other children's behaviour on the basis of immediate context? The 'rich' condition in the present study was intended to provide mothers with sufficient information about an other child that this distinction would be lost, or at least reduced. However, on reflection, even if we accept that the level of information mothers received about the other child did match the information mothers had about their own child, the information is specific to the situation being described and the background of the child currently. The information about the other child is

still essentially a 'snapshot' of that child's life and background as it is now. Whilst this information may provide a mother with some cues from which to make attributions about the child's behaviour, it is still vastly different to the information a mother has as a result of her history with her child. In order to eliminate this discrepancy, one would need to ask mothers to make attributions about their own child and then compare them to attributions about an other child for whom they also have an historical knowledge. Given the premise that a child-serving bias is the reflection of an emotional or defensive mechanism on the part of the mother, this 'other' child would also have to be one to whom the mother was not related and in whom the mother did not have the same emotional investment as she would her own child. A similar aged child of a good friend of the mother may provide an ideal other child in this sense.

If mothers still report the cause of their child's negative behaviour to be more external, unstable and specific than that of an other child when these considerations are addressed, one can argue that this difference is more reflective of a protective strategy than differences in information about the two children. However, even with the most creative methodological design, such an interpretation could still be criticised that the levels of information are not completely equalised. At this point, therefore, it is prudent to acknowledge that possibility and recognise it as a pragmatic constraint of this research. It is not ever possible to equalise the amount of knowledge and information a mother holds about two different children (of whom one is not her own), but the design of the next study will go as far as it seems possible in attempting to meet that consideration. In order to more fully

substantiate the claim that a child-serving bias is governed by a protective reaction to a threatening situation, one needs not only to rule out the informational explanation but also to demonstrate that threat is the influential factor. That is, does the extent of a child-serving bias increase if the level of threat increases? This is a question raised in the Discussion of Study One (see page 58).

Before examining possible factors that may increase levels of threat to mothers, it is important to try and establish what is meant by 'threat' and to identify exactly what it is that is being threatened. Campbell and Sedikides (1999) argue that demonstrations of a self-serving bias are moderated by 'self-threat' or threat to the self concept. They endorse Baumeister et al (1996)'s definition of self-threat: "when favourable views about oneself are questioned, contradicted, impugned, mocked, challenged or otherwise put in jeopardy" (p.8). The misbehaviour of a child, therefore, will be threatening to a mother's self-concept when mothers regard their child's misbehaviour as negatively reflecting upon themselves in some way. This is turn should increase their motivation to make a biased attribution which favours their child over others.

Exactly what is being threatened is difficult to capture but is associated with the extent to which a mother's self-concept is tied up with her parenting role or identity. Presumably, if her child's negative behaviour does not translate into a sense that her view of herself is "questioned, contradicted, impugned, mocked, challenged or otherwise put in jeopardy", she will not be motivated to attribute differently for her own and other children. Research in social psychology lends weight to the probability that one's self concept is affected by those with

whom we have close relationships. Aron, Aron, Tudor and Nelson (1991) describe the significance of being in a close relationship in terms of including other in the self. Their experiments were based in part on Lewin's (1948) general notion of overlapping selves and in part on the self-expansion model of self that they proposed some years before (Aron and Aron, 1986) and built upon subsequently (Aron and Aron, 1997; Aron, Aron and Norman, in press).

The self-expansion model proposes that a central human motivation is self-expansion and that one way people seek such expansion is through close relationships in which each includes the other in the self. The aspect of the model that is of importance as far as the present research is concerned is the 'inclusion-of-other-in-the-self' (IOS) aspect. It is argued that people experience close others as if they were in some sense included in the self. In addition, they argue that cognitive processing and evaluation are affected by being in a close relationship as if the other person's characteristics were to some extent one's own. These claims are made on the basis of participants' responses to a Venn-diagram metaphor of overlapping senses; in participants' lessened discrimination between self and close others in allocating resources and their lessened differences between self and close other perspectives in attributions, image-based memory and other cognitive processes. Aron & Fraley (1999) have reviewed the range of methodologies used that measure the inclusion of other in the self and concluded that they do successfully differentiate close from nonclose relationships.

It is fair to say that much of the supporting evidence for those claims are based upon romantic relationships (e.g., Agnew, Van

Lange, Rusbult and Langston, 1998; Mackay, McFarland and Buehler, 1998) or platonic close friendships (e.g., Nisbett, Caputo, Legant and Marecek, 1973 Study 3; Goldberg, 1981; Sande, Goethals and Radloff, 1988). No published research has examined or measured whether this IOS concept applies within the context of the mother-child relationship. The argument presented here is that whilst mothers do not enter into a relationship with their child in the same way that they enter romantic relationships or platonic friendships with other adults, the very essence of a mother-child relationship creates a sense of 'inclusion-of-child-as-self' for the mother. That is, many mothers would describe some measure of 'closeness' between themselves and their child(ren). Given that measures used to assess inclusion of other in self (described above) correlate with other well-validated measures of relationship 'closeness' (e.g., the Relationship Closeness Inventory, RCI, Berscheid, Snyder & Omoto, 1989; the Sternberg Intimacy scale, SIC, Sternberg, 1988; the Subjective Closeness Index, SCI, Berscheid et al, 1989),a measure of this concept would be an asset to Study Three. It would enable an examination of between-group differences in the demonstration of the bias.

Mothers' sense of parenting satisfaction did moderate the demonstration of a bias on two dimensions, in the direction that one would anticipate according to the threat model. Less satisfied mothers rated the cause of their child's behaviour as more stable and less external to themselves than did highly satisfied mothers. However, if a child's negative behaviour only becomes threatening when a mother has a high sense of her child as part of herself (which motivates her to see her child's negative behaviour as caused by more external, unstable and specific causes than other children), one would not necessarily

expect mothers' depression, self-esteem, sense of parenting efficacy, sense of parenting satisfaction or any other factor to significantly affect the demonstration of a child-serving bias. That is, there is no reason to assume that a depressed (low self-esteem / ineffective / dissatisfied) mother would be any less likely to include her child in her sense of self than other mothers. This could explain why these variables, which were introduced as between-group factors in Study One and Study Two, did not interact with the effect of attributional target on all of the dimensions predicted. One needs to establish the extent to which mothers include their child as part of themselves before introducing other between-subject variables which may actually serve as proxy indicators of inclusion of child as self.

Study Three will measure this concept of child-as-self using a modified version of Aron et al's (1992) Inclusion of Other in the Self (IOS) Scale. The choice of this instrument over any of the other measures of relationship closeness is that it is very brief and correlates well other measures of relationship closeness (see above, and Agnew, VanLange, Rusbult & Langston, 1998; Aron & Fraley, 1999). It is a self-report and is easily adaptable for mother-child relationships (Aron, personal communication, 2000).

A further issue concerns threat. If attributions for own child's misbehaviour are biased as a protection-from-threat strategy, then if the levels of threat are reduced, then the magnitude of the bias should reduce accordingly. Theoretically, there are a number of variables that could influence the extent to which mothers are threatened by their child's misbehaviour. For example, older children are consistently reported to be

perceived as more responsible for their behaviours than their younger counterparts (e.g., Walker, Garber & Vanslyke, 1995; Johnston, Patenaude & Inman, 1992; Dix & Grusec, 1985; Freeman et al., 1997). Therefore, mothers may feel more threatened by their younger child's behaviour than they would for their older child's (which is less of a reflection on them as a parent). However, given that Study Three is still interested in the own-other child difference, it would be methodologically difficult to ask mothers to attribute about an older and younger child of their own and other older and younger children because described misbehaviours for one age group may be developmentally inappropriate for the other.

Instead, Study Three will manipulate the extent to which the misbehaviour that presented to mothers is threatening. Weary-Bradley's formulation of self-serving attributional biases (1978) suggests that the setting of different behaviours affects the way in which they are explained. Specifically, "the effects of publicity of interpretive activities generally will act to raise a person's concerns about the defensibility of his or her attributional presentation." (p141). Weary et al (1982) explored this hypothesis and looked at the differences in attributions made for private versus public events. They found that for negative events, attributions to factors outside of the self was higher for public over private settings. Further work also supports the notion that individuals make increasingly self-serving attributions when they are asked to give a public (vs. private) account of negative outcomes. For example, in Lerner & Tetlock's (1999) review of accountability effects, many examples are presented in which cognitive biases are amplified under conditions where individuals are required to justify or account for behaviours. These strands of research imply that mothers

will attribute differently when they are expected to provide an account for negative behaviour which occurs in public than for identical behaviours occurring in private. It is predicted that misbehaviour that occurs in a private setting, that is only witnessed by the mother herself, will pose less of a threat to the mother than the same behaviour demonstrated before a public audience. Both settings may provoke some bias, as even a private transgression may impinge upon a mother's sense of child-as-self, but a public display of misbehaviour is predicted to create a larger difference in attributional ratings for the two children than a private one.

Finally, Study Three will introduce an additional measure of bias used in other areas of psychological research. In other fields, researchers have demonstrated that people are biased in their judgments and see themselves as less likely to encounter negative experiences in the future than others (e.g., Weinstein and Klein, 1996; Harris and Middleton, 1994; Svenson, 1981). Put another way, people are unrealistically optimistic about their own future in comparison to others. In the present study, mothers will be asked to make judgments concerning the likelihood of their child encountering certain experiences in 30 years' time. For example, how likely is their child to be burgled at age 40 or how likely is their child to be unemployed at age 40. These 'future judgment tasks' would also be conducted requiring mothers to rate how likely the 'other' child (i.e., their friend's child) is to be burgled or unemployed at age 40. As far as the present study is concerned, this task is appropriate because mothers have no informational or cognitive basis upon which to base their judgments. Therefore, if mothers report that their own child is less likely to encounter negative experiences in 30 years' time (and/or more likely to encounter

positive experiences) than the other child, a stronger case for a motivational model of the child-serving bias can be made.

Summary and Hypotheses

Study Three aims to build upon the first two studies and to establish whether the difference displayed by mothers in their attributions for difficult behaviours demonstrated by their own and other children is a genuine extension of the self-serving bias motivated by an inclusion of their own child in their self or the result of different amounts of information being held about different children. It will do this by identifying mothers who have an extensive set of historical information about two children, one of whom is their own and one of whom is not. The 'other' child will be a child of a friend of the mother whom she reports to know well. Mothers will be asked to offer attributions for a specific example of misbehaviour for each child as well as to complete a future judgment task rating the likelihood of each child encountering certain experiences.

Study Three aims to address the following questions:

1) do mothers include their own child as part of themselves?
2) if they do include their child as part of themselves, do they demonstrate a child-serving bias toward their child?
3) if they demonstrate a child-serving bias, is it moderated by threat?

STUDY THREE

Method

Participants

A power calculation based on the effect sizes of the results obtained in Studies One and Two on the dimensions of stability and globality (Study One effect size = 1.05; Study Two effect size = .79), with alpha level of 0.05 and 80% power showed that a sample of 42 participants was required to detect the expected mean differences. Mothers were recruited by invitations sent via every Year 4 (aged 9-10) child in seven Hampshire schools, selected to reflect a variety in size, location and catchment area. Two schools had very low numbers of children eligible for free school meals (less than 15%), two schools had very high numbers of such children (over 80%) and three schools had between 30% and 65% of children eligible for free school meals. No information regarding the educational level or social class of individual families was received.

One hundred and eighty three invites were sent out. Mothers were asked if they would like to take part in a study which looked at mothers' general views and opinions on parenting and child behaviours. Mothers were asked also to nominate a friend that might like to take part in the study whose child they knew well and whose child was the same age and sex as their own. This nominated friend's child would then serve as the 'other' child about whose behaviour mothers will be asked to make attributions.

Ninety-six of these initially invited mothers (Mother A's) expressed a willingness to take part in the study. Sixteen of these were excluded because they had taken part in previous

studies and a further 20 were excluded because they could not or did not want to nominate a friend with a child that met the criteria. Of the sixty mothers who successfully nominated a friend to take part, 10 nominated friends who did not consent to take part and therefore the mothers that had nominated them were also excluded. This left a total sample of fifty mothers who were willing to take part (Mother A's) and whose nominated friend was also willing to take part (Mother B's). Mother A's and Mother B's were sent a questionnaire pack, requiring 100 questionnaire packs to be sent out in all. A total of 35 Mother A's and 23 Mother B's completed the required questionnaires, representing a response rate of 70% and 46% respectively. Twenty datasets 'overlapped' - that is, Mother A and her nominated friend (Mother B) both completed their questionnaires. In the remaining cases, either Mother A completed the questionnaires but Mother B did not, or Mother B completed the questionnaires but Mother A did not.

Of the 58 mothers who returned datasets (that is, both Mother A's and Mother B's), the mean age of the mothers was 35 years and 7 months (range 26 years - 41 years) of whom 47 (80%) were married or living with a partner. The average number of children per household was 2.2 (range 1 - 5); the mean age of their own child was 9 years and 6 months (range 9 years & 0 months - 10 years and 7 months), of whom there were 27 (46%). The sample was predominantly (98%) white/Caucasian.

Materials

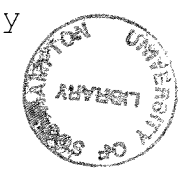
Child-as-Self Scale

This was an adapted version of Aron and Aron's (1991) other-self scale, comprising a series of overlapping circle pairs designed to represent the extent to which an individual includes a named

other as part of themself. The measure has been shown to provide a robust indication of relational closeness, attachment and identification and it correlates well with other measures of relationship closeness (e.g., the Relationship Closeness Inventory, RCI, Berscheid, Snyder & Omoto, 1989; the Sternberg Intimacy scale, SIC, Sternberg, 1988; the Subjective Closeness Index, SCI, Berscheid et al, 1989). The scale has been used extensively in research involving romantic relationships, platonic friendships and laboratory-induced friendships (e.g., Agnew, Van Lange, Rusbult & Langston, 1998; Mackay, McFarland and Buehler, 1998; Nisbett, Caputo, Legant & Marecek, 1973 Study 3; Goldberg, 1981; Sande, Goethals & Radloff, 1988). However, it has not been used with parent-child relationships and therefore a pilot study was conducted to ensure that the measure was conceptually appropriate for the measurement of the extent to which mothers include their child as part of themselves.

Pilot study.

Thirty mothers of children aged between 7 and 12 years (none of whom were taking part in the main study) were presented with an adapted version of the IOS scale (see Appendix 19). This comprised one sheet with 9 circle pairs that touch or overlap to varying extents, starting with two circles side by side and ending with the two circles on top of each other (i.e., one circle). They were asked to indicate which pair of circles best represented the relationship they have with their child. They were then asked open-ended questions about the measure in order to establish exactly what the measure meant to them. Mothers reported that "the circles seemed to be showing how much [me] and [my child] are one" or "the closer circles represent a more 'overlapping' relationship between me and my child". Importantly, mothers suggested that the measure did not simply



reflect the level of closeness between themselves and their child, but rather, that it captured something more about the identification of the child as part of oneself. On the basis of the pilot study, the modified version of the IOS scale was adopted and a copy can be found in Appendix 19.

Friend-as-Self Scale

This is similar in content to the Child-as-Self scale described above, except that the mother is asked about the extent to which she sees her friend (i.e., the other mother) as part of herself. The premise for the inclusion of this measure is that if mothers are motivated to offer child-serving attributions for their own child because they see their child as part of themselves, then they may also be motivated to make other-child-serving attributions about their friend's child if they see their friend as part of themselves. Therefore, this measure can be used as a covariate in statistical analyses to control for this possibility. A copy of the Friend-as-Self scale can be found in Appendix 20.

Future Judgment Task

In other fields, researchers have demonstrated that people are biased in their judgments and see themselves as less likely to encounter negative experiences in the future than others (e.g., Weinstein & Klein, 1996; Harris & Middleton, 1994; Svenson, 1981). This tendency can be regarded as a bias that is not the result of a difference in the amount of information a person has about themselves and other people. That is, even when there is an approximately equal likelihood of similar outcomes for two people, most individuals will be more optimistic about their own future than that of someone else. As far as the present study is concerned, such a task is appropriate because mothers could be

asked to make judgments about the likelihood of events involving their own and another child which are, objectively, about equally likely. For example, if mothers report that their own child is less likely to encounter negative experiences (e.g., being burgled) in 30 years' time and/or more likely to encounter positive experiences (e.g., winning the lottery) than the other child, and if the size of this effect correlates with the magnitude of the attributional bias, a stronger case for a motivational model of the child-serving bias can be made.

Pilot study.

A pilot study was conducted to develop a mother-child Future Judgment Task. Ten mothers of children aged 7-12 years were asked to suggest a number of hypothetical positive and negative situations or experiences that their child may or may not encounter in the future (30 years' time). They were also asked to suggest some experiences that their child may have some control over and some experiences that were more due to uncontrollable factors, such as 'chance', 'luck' or 'fate'. From the suggestions that were made, ten positive and ten negative outcomes were selected, of which half were seen as somewhat controllable and half were seen as more uncontrollable. Thus, five items were positive-controllable (e.g., 'in thirty years' time, my child will have good qualifications'); five items were positive-chance (e.g., 'in thirty years' time, my child will win the lottery); five items were negative-controllable (e.g., 'in thirty years' time, my child will have been in prison') and five items were negative-chance (e.g., 'in thirty years' time, my child will have cancer'). In order to validate these items, a further ten mothers of 7-12 year old children were asked to rate the items as positive or negative and controllable or uncontrollable. All of the mothers rated the items in a way

which confirmed the initial categories (i.e., all the positive-controllable items were rated as positive and controllable, etc.).

Upon completion of this pilot study, a questionnaire was constructed using the twenty validated items. Alongside each item, a five-point Likert scale was presented, offering respondents the options of strongly agreeing through to strongly disagreeing with each item. Mothers received two copies of this questionnaire - one which relates to their own child (Future Judgment Task-own child; FJT-own) and one which relates to the other (i.e., their friend's) child (Future Judgment Task-other child; FJT-other). Explicit instructions at the start of the questionnaire encouraged the mother to imagine the child in thirty years' time and to rate the likelihood of each item with their 'first reaction' to the statement. Copies of both the questionnaires can be found in Appendix 21 (FJT-own) and Appendix 22 (FJT-other).

The Strength & Difficulties Questionnaire (SDQ; Goodman, 1997)

This measure is the same as that used in Studies One and Two. The SDQ is a brief behavioural screening questionnaire that can be completed in about five minutes by the parents or teachers of children aged 4 to 16. There is also a child-complete version for over-11's. It is a well validated instrument and has proven to be as effective as both the Child Behaviour Check List (CBCL; Achenbach, 1991) and the Rutter Scales (Elander & Rutter, 1996) in identifying children with clinically significant levels of behavioural disturbance (Goodman, 1997; Goodman & Scott, 1999). As well as its brevity and reliability, the main advantage of this measure is that it includes items pertaining to children's prosocial behaviour. The SDQ asks five questions about the

child's prosocial behaviour, alongside four other 5-item subscales measuring conduct problems, emotional symptoms, hyperactivity and peer relationships. A copy of this questionnaire can be found in Appendix 2.

Attributions Questionnaires

These questionnaires are similar in content and format to the attributions questionnaires used in Studies One and Two, with some modifications to enable them to fulfill the experimental demands of the present study. The Own-Child Attributions Questionnaire (OWN-CAQ) is designed to elicit mothers' explanations for negative behaviours demonstrated by their own child. There is a parallel version designed to elicit explanations for other children's behaviour (the Modified Other-Child Attributions Questionnaire, OTHER-CAQ) which will be described later. Firstly, mothers are presented with a written vignette of negative child behaviour and asked to imagine that the behaviour has been demonstrated by the participant's own child. This is followed by a series of questions that relate to attributional dimensions of internal-to-child, controllable-by-child, stable, universal, global, internal-to-mother and controllable-by-mother. Mothers are asked to rate on a five point scale the extent to which they believe that

1. The behaviour is caused by something specifically to do with their child, rather than something else?
2. Their child would have control over behaving in this way?
3. The cause of their child's behaviour would be present again in the future or whether it was a 'one-off'?
4. This behaviour is caused by something unique to their child or by something common to most children of that age?
5. The cause would influence their child in other situations or whether it would only influence this sort of situation?

6. The behaviour is caused by something specifically to do with them, as the child's mother, or something else?
7. They have any control over their child behaving in that way?

The important difference to the questionnaire from Studies One and Two concerns the vignette of behaviour that is presented to the mother. The hypothesis of the present study is that the level of attributional bias demonstrated by the mother will be moderated by the extent to which the misbehaviour presents a 'threat' to the mother. Therefore, the setting of the misbehaviour being demonstrated by the child was manipulated to occur either in public, (that is, before an 'audience') or in private (that is, no-one except the mother witnessed the behaviour). The predication is that negative behaviour occurring in private will provoke less threat to the mother than negative behaviour occurring in public (see pages 105-106). Two vignettes were adapted from Studies One and Two. The first involves a child acting defiantly in a shop; in the private (low threat) condition, the shop is small, there are no customers in it other than the mother, and the shopkeeper has gone to retrieve something from another part of the shop. In the public (high threat) condition, however, the child displays identical behaviour in a crowded supermarket. This vignette is labeled the 'shop' vignette. An alternative behavioural vignette was also adapted from Studies One and Two, which involves the child acting defiantly toward a friend playing with lego. In the private (low threat) condition, the friend's mother is absent and there are no other people present. In the public (high threat) condition, the same behaviour is displayed when there are visitors in the home who all witness the child's behaviour. This vignette is labeled the 'lego' vignette. One additional item was included in the questionnaire which intended to assess

the validity the threat manipulation. Mothers were asked to rate the extent to which the described would upset them on a five point scale(1=not at all upset, 5=extremely upset). Therefore, there are four versions of this attributions questionnaire: shop-private; shop-public; lego-private; lego-public. Copies of these questionnaires can be found in Appendices 24, 25, 26 and 27, respectively.

An alternative questionnaire was constructed in which mothers were required to imagine that the child displaying the negative behaviours was their friend's child, whose name was written in by the researcher prior to questionnaire completion. This other-child attributions questionnaire (OTHER-CAQ) also had four versions, exactly as described above. Copies of these questionnaires can be found in Appendices 28, 29, 30, 31, respectively.

Mothers were required to complete two attributions questionnaires - one about their own child and one about their friend's child. Vignette type was counterbalanced - if mothers received the 'lego vignette' about their own child, they would receive the 'shop vignette' about the other child. The threat condition (i.e., setting of the behaviour) was a between-subjects factor, and therefore questionnaires for both children were set either in private or public.

Information Sheet

Mothers were asked to complete an information sheet concerning their marital status, age, family constitution and employment status of all household members. A copy of the information sheet can be found in Appendix 31.

Procedure

Each mother received four questionnaires about their own child: the Child-as-Self Scale, the Future Judgment Task, the Strengths and Difficulties Questionnaire and the Attributions Questionnaire. She also received four questionnaires about her friend's child (whose name was inserted on the questionnaires): the Friend-as-Self scale, the Future Judgment Task, the Strengths and Difficulties Questionnaire and the Attributions Questionnaire. The order of completion was counterbalanced randomly across participants. The information sheet was always presented last. Each set of questionnaires was mailed to participants with a covering letter and instructions. A pre-paid envelope was included, and participants received one reminder letter and one reminder phone call if their questionnaire pack was not returned within three weeks.

Data Reduction and Analysis Strategy

Of the 100 datasets sent out, 58 were completed successfully - 35 by Mother A's and 23 by Mother B's. Of the 35 returned by mother A's, 20 were also returned by the associated (i.e., nominated) Mother B. If statistical analysis was only conducted on the datasets from the 20 pairs of Mother A's and Mother B's (as was originally intended), valuable power would be lost in the multivariate analyses, therefore preliminary examination of the datasets was undertaken to see whether the questionnaires could be aggregated. There was a possibility that Mother A's, being the initially invited mothers to take part would respond differently to questions than Mother B's. If this was the case, it would be inappropriate to aggregate the data from the 58

mothers in total. To examine whether there were any differences between variables between Mother A's and Mother B's' responses to questions a number of paired sample t-tests were conducted. Firstly, an examination of SDQ scores was conducted to determine whether child A was rated in the same way by both mothers on this measure of behavioural disturbance. Mother A's score on their own child's (i.e., Child A's) SDQ measure was compared to Mother B's score on the other child's (i.e., Child A's) SDQ score in a paired samples t-test. Similarly, Mother B's score on their own child's (i.e., Child B's) SDQ measure was compared to Mother A's score on the other child (i.e., child B). Both analyses were non-significant $t(1,19)=.275$, $p=.786ns$ and $t(1, 19)=.381$, $p=.707ns$, respectively. This is important because it indicates that mothers are detecting and reporting the level of behavioural disturbance in their own child to the same extent as a friend. Mother A's mean scores were compared to Mother B's mean scores on the attributional dimension ratings as follows: internal to own child, controllable by own child, stable to own child, universal to own child, global to own child, internal to own mother (i.e., self), controllable to own mother (i.e., self), internal to other child, controllable by other child, stable to other child, universal to other child, global to other child, internal to other mother (i.e., friend) and controllable to other mother (i.e., friend). There were no significant differences between Mother A's responses and Mother B's responses on these measures. Similar analyses were also conducted on the FJT scores and similarly no differences were found.

Given the lack of significant differences between responses, it was appropriate to aggregate the datasets from all 58 mothers into one database and prepare them for analysis as follows.

Child-as-Self and Friend-as-Self Scales

Each scale consists of 9 circle pairs overlapping to different degrees. Each circle pair was assigned a numerical value in ascending order, where 1 represents the least inclusive relationship (i.e., the circles are close but do not overlap) and 9 represents the most inclusive relationship (i.e., the circles are on top of each other). Each mother was therefore assigned a score from 1 - 9 on each of these measures. The mean score (7.49, SD=1.45) showed that mothers do tend to rate their child as part of themselves. As well as this continuous measure, median splits were performed on both scales (Child-as-Self scale: below median = 1-7, above median = 8-9; Friend-as-Self scale: below median = 1-3, above median = 4-9). Upper and lower quartiles were also calculated for both scales (Child-as-Self scale: lower quartile = 1-6, upper quartile = 9; Friend-as-Self scale: lower quartile = 0-2, upper quartile = 6-9).

Future Judgment Task (FJT)

The FJT measures were new and therefore a factor analysis was conducted in order to ascertain whether the four derived categories (positive-control, positive-chance, negative-control, negative-chance) were conceptually robust. Separate analyses were conducted on the FJT-own and FJT-other. Similar results were derived on both measures, and therefore only the results of the FJT-own are presented here. An exploratory principal components analysis with varimax rotation and a forced four factor solution explained 56% of the variance. The four factors were labelled as follows: factor 1 "negative-control" (Cronbach's α = .80, Eigenvalue = 4.69); factor 2 "positive-chance" (Cronbach's α = .76, Eigenvalue = 3.174); factor 3

"positive-control" (Cronbach's α = .72, Eigenvalue = 1.75) and factor 4 "negative chance" (Cronbach's α = .70, Eigenvalue = 1.44). Whilst the four factors did resemble the four initial categories, some items loaded onto categories to which they were not initially assigned as demonstrated in Table 16.

Table 16

Factor analysis of FJT-own

Factor	Loading	Item number and text
didn't load	.113	6. will be unemployed
1	.627	8. will need an operation
1	.498	9. will have no money
1	.463	2. will not know many people
1	.829	11. will get cancer
1	.790	13. will be divorced
1	.466	14. will have been in prison
2	.676	12. will have lots of luck
2	.709	15. will have what they want
2	.447	19. will be happily married
2	.576	3. will win the lottery
2	.679	4. will be very attractive
2	.446	17. will have good health
3	.506	20. will have good qualifications
3	.546	1. will have a good job
3	.676	7. will be happy in life
3	.594	10. will have lots of friends
4	.554	16. will have known someone who died
4	.354	5. will be burgled
4	.445	18. will have had a car stolen

Note. Number of Subjects = 58.

Having identified which items loaded onto which factors, all of the items were scored. If respondents strongly agreed with a negative outcome, they were allocated a score of one, if they agreed a score of two, if they didn't know a score of three, if they disagreed a score of four and if they strongly disagreed a score of five. Thus, the higher the score, the less likely was that negative outcome for that child. The reverse scoring method was used for positive items, thus the higher the score, the more likely was that positive outcome for that child. Put another way, the higher the score on any item, the more optimistic the mother is about that child's chances of encountering the event. The four subscale scores were created on the basis of the derived four factor model: items 1, 7, 10 and 20 were summed to create a positive-control score; items 3, 4, 12, 15, 17 and 19 were summed to create a positive-chance score; items 2, 8, 9, 11, 13 and 14 were summed to create a negative-control score and items 5, 16 and 18 were summed to create a negative-chance score. Finally, a 'total optimism' score was created by summing the totals of all of the subscales. This exercise was conducted for mother's own child and the other child.

Strengths and Difficulties Questionnaire

This measure consists of 25 items, five each relating to the child's hyperactivity, emotionality, peer problems, conduct problems and prosocial behaviour. Scores were calculated for each of these subscales, and a total SDQ problems score was created by summing the totals of the first four subscales. This was calculated for mother's SDQ score for both her own and the other child. As well as these continuous measures, cases scored as borderline (total score = 14+) and abnormal cases (total score = 17+) were identified according to the cut-off points

reported by Goodman (1997, 1999) to provide clinically relevant levels of behavioural disturbance.

Attributions Questionnaires

These provide eight five-point scales each for own and other child's behaviour: the seven attributional dimension scores (internal to child, controllable by child, stable, universal, global, internal-to-mother, controllable by mother) and the manipulation check item score.

Each mother has the following scores: Child-as-Self Scale (continuous and binary indicators); Friend-as-Self Scale (continuous and binary indicators); SDQ scores - own child (subscale scores, total score, borderline case, abnormal case); SDQ scores - other child (subscale scores, total score, borderline case, abnormal case); FJT scores - own child (four subscale scores, total optimism score); FJT scores - own child (four subscale scores, total optimism score) and attributional scores for own and other child.

Results

There are three sections of results - the first answers questions regarding the attributional dimensions about the child's responsibility for behaviour; the second answers questions concerning unrealistic optimism and the third answers questions concerning the attributional dimensions about the mother's responsibility for behaviour.

Child's Responsibility for Negative Behaviour

The hypotheses stated previously identify three questions which the statistical analyses aim to answer:

1) is there an effect of attributional target (own child or other child) on attributional dimensions for the child's causal role in negative behaviour?
2) if so, is that effect moderated by the extent to which the mother sees her own child as part of her self?
3) if so, is that effect influenced by the level of threat of the behaviour?

In order to address the first question, analyses identical to those conducted in the previous two studies were performed. A 2 (target) x 5 (dimension) within-subjects MANOVA was performed with the attributional dimension scores (internal, controllable, stable, universal and global) as dependent variables. The MANOVA showed a main effect of target $F(1,57)=8.151$, $p<.01$; a main effect of dimension $F(1,57)=15.495$, $p<.001$ and a significant interaction between the two $F(1,57)=4.052$, $p<.01$. That is, on some dimensions, mothers scored their own child differently to the other child. To examine where these differences were, a series of univariate, within-subjects ANOVAs were conducted for each attributional dimension. Means and standard deviations are

presented in Table 17. A summary of the five univariate ANOVA results is presented in Table 18.

Table 17

Scores on dimensions by attributional target

	Own Child[a]		Other Child[a]	
Dimension	M	SD	M	SD
internal	3.12	1.27	3.25	1.16
controllable	3.96	1.12	3.89	1.08
stable	2.58	1.19	3.32	1.11
universal	3.77	1.07	3.72	.98
global	2.48	1.18	3.03	1.21

[a] n = 58 for each group

M = mean score, SD = standard deviation

Table 18

Summary of univariate analyses of variance for attributional target on dimension scores

Source	df	F				
		Internal	Controllable	Stable	Personal	Global
	within-subjects					
child type	1	.36	.16	16.06***	.13	7.17**
S within-group error	57	(1.52)	(.84)	(.99)	(.60)	(1.23)

Note. Values enclosed in parentheses represent mean square errors.

*p<.05, **p<.01, ***p<.001

In answer to question 1) above, mothers show a main effect of attributional target on two dimensions: stability and globality. Own child's negative behaviour is rated as less stable and less global than the other child's negative behaviour. This replicates the findings of Studies One and Two. The plot chart (Figure 7) illustrates the pattern of effects on the attributional dimensions.

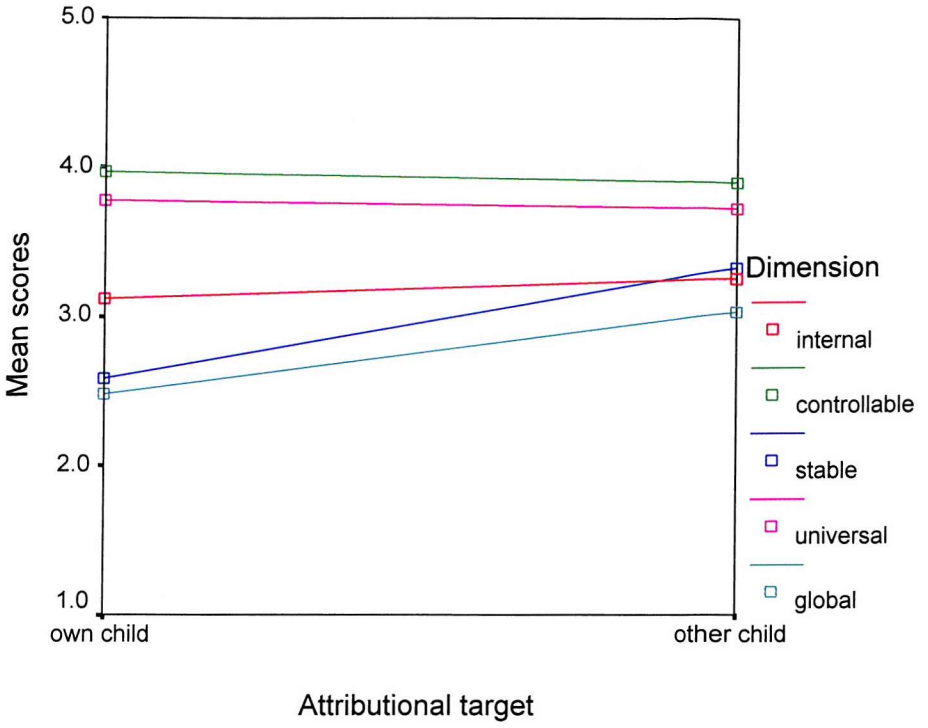


Figure 7. Mean scores on five attributional dimensions by attributional target

In order to answer the second question regarding whether this effect is moderated by the extent to which the mother sees her child as part of herself, further analyses were conducted.

There are two ways in which this question can be addressed statistically. One method is to include a binary Child-as-Self scale score (high Child-as-Self vs. low Child-as-Self) as a between-group factor in a within-subjects MANOVA.

A 2 (target) x 5 (dimension) x 2 (Child-as-Self status) mixed design MANOVA was performed with the attributional dimension scores (internal, controllable, stable, universal and global) as dependent variables. The Child-as-Self status used the upper and lower quartiles of the sample to represent high Child-as-Self

status (n=19) and low Child-as-Self status (n=12), respectively. The MANOVA showed a main effect of target $F(1,29)=6.75$, $p<.05$ and a main effect of dimension $F(1,29)=8.74$, $p<.001$. It also showed a significant interaction between the target and Child-as-Self status $F(1,29)=5.38$, $p<.05$ and a three way interaction between target, dimension and Child-as-Self status $F(1,29)=4.79$, $p<.05$. That is, on some dimensions, mothers scored their own child differently to the other child, if they scored highly on the Child-as-Self measure. To examine where these differences were, a series of univariate, within-subjects ANOVAs were conducted for each attributional dimension. Means and standard deviations are presented in Table 19; a summary of the univariate analyses is presented in Table 20.

Table 19

Means and standard deviations of the attributional dimension scores by Child-as-Self status

	Own child				Other child			
	Low		High		Low		High	
Dimension	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Internal	3.33	(1.30)	3.10	(1.41)	2.91	(1.16)	3.68	(1.24)
Controllable	3.91	(1.08)	3.94	(1.39)	4.00	(1.27)	4.15	(1.11)
Stable	2.66	(1.30)	2.10	(1.10)	3.41	(1.37)	3.15	(1.16)
Universal	3.58	(0.79)	3.89	(1.10)	3.50	(0.79)	3.78	(1.03)
Global	3.00	(1.20)	1.78	(0.97)	2.83	(1.33)	3.00	(1.33)

Note. 'Low' = low Child-as-Self status, 'High' = high Child-as-Self status. n = 12 for Low Child-as-Self group and 19 for High Child-as-Self group. M = mean score, (SD) = standard deviation.

Table 20

Summary of univariate analyses of variance for attributional target and Child-as-Self (CS) status

Source	df	F				
		Internal	Control	Stable	Personal	Global
	between-subjects					
CS status	1	.65	.05	1.45	1.03	2.26
S within-group error	29	(1.64)	(2.32)	(1.70)	(1.29)	(1.77)
	within-subjects					
Target	1	.05	.43	9.47**	.22	3.48*
Target x CS status	1	2.12	.08	.27	.00	6.05*
Target x S within-group error	29	(1.72)	(.72)	(1.26)	(.60)	(1.15)

Note. Values enclosed in parentheses represent mean square errors. S = subjects, CS = Child-as-Self status.
*p<.05, **p<.01, ***p<.001

The univariate analyses of variance reveal that the same two dimensions are still affected by attributional target - own child's behaviour is regarded as less stable and less global than that of other child's behaviour - but that when the mother scores lower on the measure of Child-as-Self this effect disappears on the dimension of globality. The plot diagrams (Figures 8 and 9) illustrate this interaction more clearly.

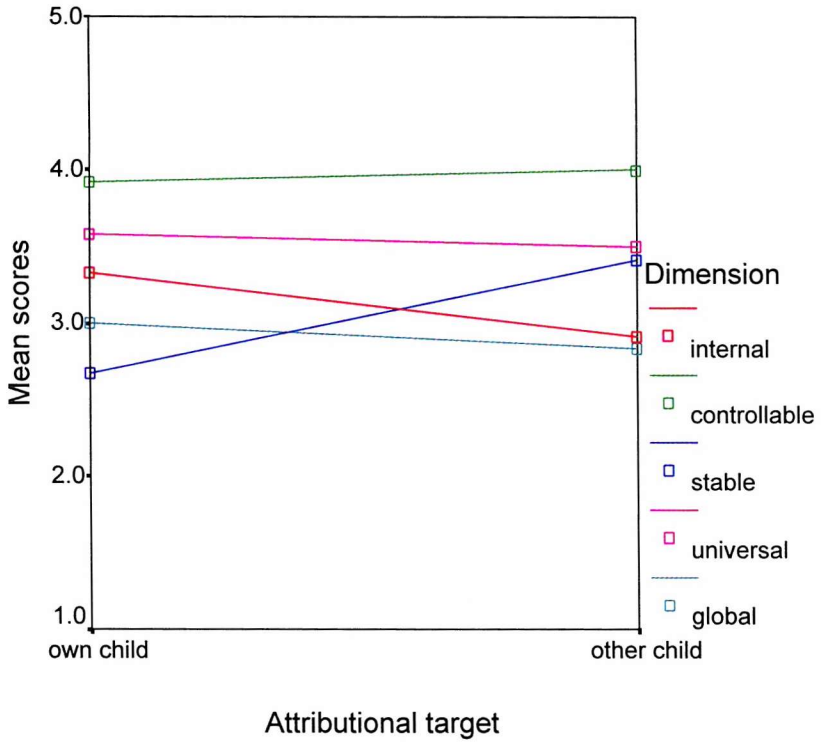


Figure 8. Mean scores on five attributional dimensions by attributional target when Child-as-Self status is low (n = 12)

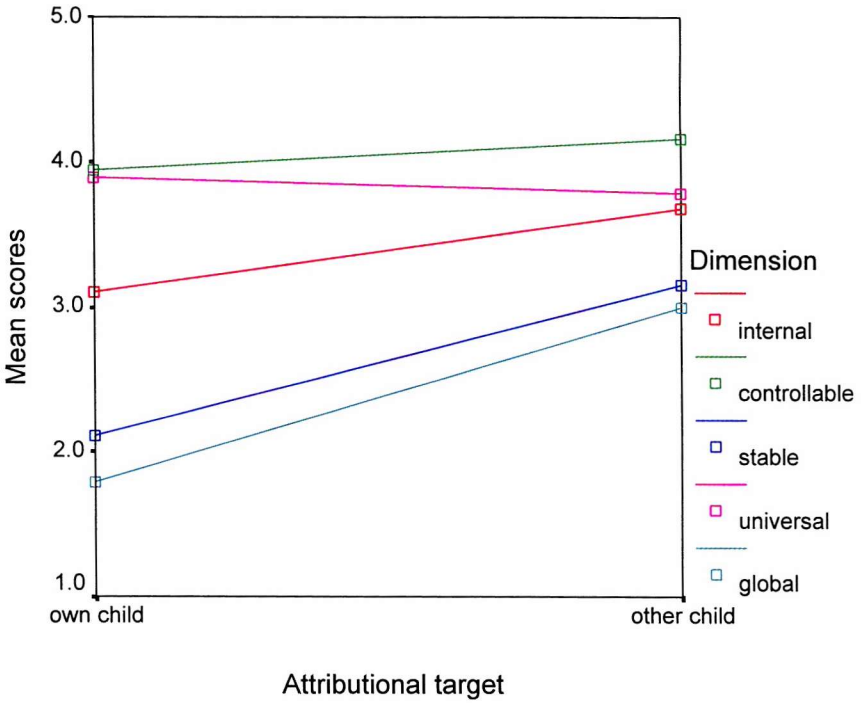


Figure 9. Mean scores on five attributional dimensions by attributional target when Child-as-Self status is high (n = 19)

The second analysis which addresses the same question is almost identical to that just described, with the exception that it divides the Child-as-Self Scale into three groups - low, medium and high - and includes this factor as the between group variable. The advantage offered by doing this is that no subjects are excluded, but the disadvantage is that there is a less powerful distinction between the groups on the Child-as-Self measure. This analysis was conducted as described above. The results were very similar to those presented for the two group comparison. There was a main effect of target $F(1,55)=7.35$, $p<.01$ and a main effect of dimension $F(4,52)=14.62$, $p<.01$. There were also two significant interactions; target interacted with dimension $F(4, 52)$, $p<.05$ and target interacted with Child-as-Self status $F(2,55)=3.46$, $p<.05$. There was not a significant three-way interaction between target, dimension and Child-as-Self status. Post-hoc univariate analyses of variance revealed that the same two dimensions are still affected by attributional target - own child's behaviour is regarded as less stable and less global than that of other child's behaviour - but only when the mother is in the 'High' Child-as-Self group. Mothers in the Medium and Low groups only showed an effect of attributional target on the dimension of stability.

Having established that there is an interaction between mothers' attributions and the extent to which they see their child as part of themselves, the third question aimed to discover whether this effect is influenced by the level of threat posed by the negative behaviour. The present study manipulated the level of threat presented in the behavioural vignettes by embedding some in a private (i.e., low threat) setting and some in a public

(i.e., high threat) setting. This between-subjects factor was introduced into the analysis previously described to determine whether there is a four way interaction of attributional target, dimension, Child-as-Self status and setting. That is, do mothers who see their child as part of themselves rate their own child differently to other children on some attributional dimensions when the setting (i.e., level of threat) is manipulated?[5] A 2 (within-subjects, target) x 5 (within-subjects, dimension) x 2 (between-subjects, Child-as-Self status) x 2 (between-subjects, setting) mixed design MANOVA was conducted using the mean attributional scores as dependent variables. There were overall main effects of attributional target $F(1, 27)=6.22$, $p<.02$ and attributional dimension $F(1, 27)=8.98$, $p<.001$ and a significant interaction between the two $F(1, 27)=3.90$, $p<.02$. There were also a number of other significant interactions: attributional target interacted with Child-as-Self status $F(1, 27)=4.84$, $p<.05$; Child-as-Self status interacted with setting $F(1, 27)=7.63$, $p<.01$ and there was a significant four way interaction between attributional target, attributional dimension, Child-as-Self status and setting $F(4, 24)=3.33$, $p<.03$. Post-hoc univariate analyses of variance were conducted in order to explore the four way interaction. Results are summarised in Table 21.

[5] The threat manipulation was assessed by comparing the extent to which mothers reported 'feeling upset' by the behaviour either in public or private. The independent samples t-test showed a non-significant difference between groups on this measure. However, it was decided to continue with the proposed analysis because the mean scores were in the proposed direction (i.e., mothers were less upset by the behaviour in the private setting) and because 'feeling upset' by the behaviour may not fully capture the essence of threat to self-concept.

Table 21

Summary of univariate analyses of variance for attributional target, Child-as-Self status and setting for each dimension

Source	df	F				
		Internal	Control	Stable	Personal	Global
between-subjects						
CS status	1	.54	.16	1.36	.75	2.35
Setting	1	.40	1.25	.00	.15	.19
CS x Setting	1	1.38	9.99**	.16	.00	.16
S within-group error	27	(1.62)	(1.81)	(1.81)	(1.38)	(1.88)
within-subjects						
Target	1	.35	.36	15.58***	.25	4.84*
Target x CS	1	5.75*	.11	.00	.00	3.93*
Target x Setting	1	4.49*	.36	1.83	1.07	1.36
Target x CS X Setting	1	8.20**	.11	7.24**	.19	.24
Target x S within-group error	27	(1.34)	(.76)	(1.05)	(.60)	(1.14)

Note. Values enclosed in parentheses represent mean square errors. S = subjects, CS = Child-as-Self status

*p<.05, **p<.01, ***p<.001

The analyses shows a number of patterns. On the dimension of internality, there is a significant interaction of attributional target with Child-as-Self status - mothers who see child as part of themselves attribute their child's negative behaviours to more external causes. There is also a significant interaction of target with setting - behaviour presented in the public (i.e., high threat) setting provoked more external attributions for own

child. Finally, there is a significant interaction of target with Child-as-Self status and setting as predicted: when mothers see their child as part of themselves and the behaviour is presented in a public setting, mothers rate the cause of their own child's behaviour as more external than that of the other child. On the dimension of stability, there remains an effect of attributional target - own child's negative behaviour is attributed to less stable causes than other children's negative behaviour. There is also a significant interaction of target with Child-as-Self status and setting: when own child is regarded as part of self, the mother attributes their negative behaviour to less stable causes especially when the behaviour is presented in public. Finally, on the dimension of globality, there remains a main effect of attributional target - own child's behaviour is rated as caused by more specific factors than other children's behaviour. There is also an interaction of target with Child-as-Self status: the main effect is amplified when mothers rate their child as part of themselves.

To summarise, then, there is an effect of attributional target, which is moderated by the extent to which the mother sees her child as part of herself, which is further influenced by the level of threat presented in the experimental situation.

Unrealistic Optimism

The hypotheses stated previously identify two questions which the statistical analyses aim to answer:

1) are mothers more optimistic about the chances of their own child experiencing certain situations in the future compared to their friend's child?
2) if so, is this optimism influenced by the extent to which the mother sees her child as part of herself?

The Future Judgment Task (FJT) provides a measure of mothers' optimism about the likelihood of their own and the other child having experienced twenty different events or situations in thirty years' time. In order to answer the questions above, the scores on the FJT-own (mean = 66.36, SD = 5.78) and FJT-other(mean = 65.01, SD = 6.06) were entered as dependent variables in a repeated measures ANOVA with attributional target (own child vs. other child) as a within-subjects variable. There was a significant difference between the scores $F(1,57) = 8.18$, $p<.01$ - mothers rated their own child's likelihood of encountering certain events more optimistically than they did for other child. In answer to question 1) above, mothers are more optimistic about the chances of their own child experiencing certain situations in the future compared to their friend's child.

In order to test whether this effect is influenced by the extent to which mothers rate their child as part of themselves, further analyses were conducted. As before, two analyses were conducted - one where the binary (high vs. low) measure of Child-as-Self was entered as a between-group factor in a repeated measures ANOVA and one where the three-group comparison (high vs. medium vs. low) was used. Both analyses yielded significant results. For consistency, the binary between-group analysis is presented here in Table 22.

Table 22

Difference in mean scores on Future Judgment Task by attributional target and Child-as-Self status

Source	df	F Future Judgment Task
within-subjects		
Target	1	3.89
Target x CS status	1	4.86*
Target x S within-group error	29	(7.58)

Note. Values enclosed in parentheses represent mean square errors. S = subjects, CS = Child-as-Self status.
*p<.05

This answers question 2); the ANOVA shows a significant interaction between attributional target and Child-as-Self status; mothers are more optimistic about their own child's future than about the other child's future when they see their own child as part of themselves. This effect is illustrated in Figure 10.

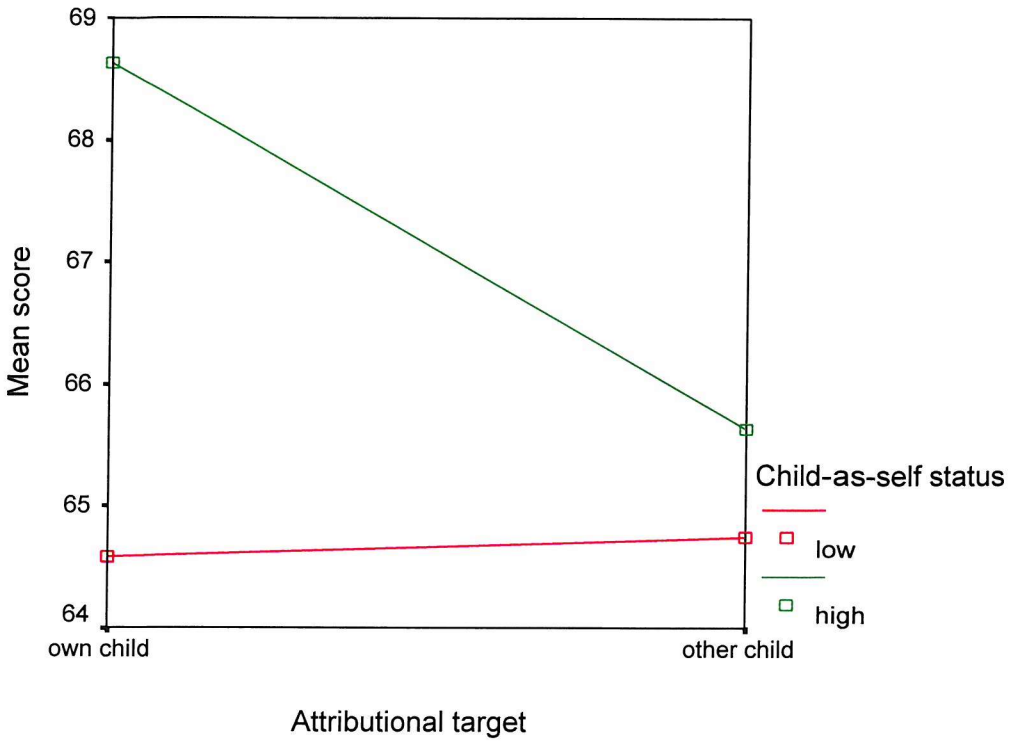


Figure 10. Mean scores on Future Judgment Tasks by attributional target by Child-as-Self status

Although not necessary to answer the questions outlined above, one further analysis was conducted as a matter of interest using the FJT's four subscales (positive-control, positive-chance, negative-control, negative-chance). This was in order to establish whether mothers are more optimistic about positive rather than negative events (valence) or similarly whether they are more optimistic about controllable rather than chance events (locus) involving their own versus other children (target). A 2(target: own vs. other) x 2(valence: positive vs. negative) x 2(locus: control vs. chance) repeated measures MANOVA was conducted. The analysis revealed main effects of target $F(1,57)=12.70$, $p<.01$; valence $F(1,57)=156.86$, $p<.01$ and locus $F(1,57)=621.62$, $p<.01$. There were also significant interactions between target and valence $F(1,57)=5.63$, $p<.05$; and target and

locus $F(1,57)=7.30$, $p<.01$. There was not a significant three-way interaction between target, valence and locus. The results show that mothers were more optimistic about their own than the other child. They were also more optimistic that positive events (i.e., they were more likely) compared to negative events (i.e., they were less likely), although this effect is more pronounced for their own child. In addition, controllable events were seen as more likely to occur than chance events, but again this effect was greater for their own child.

Mother's Responsibility for Negative Behaviour

The hypotheses stated previously identify three questions which the statistical analyses aim to answer:

1) is there an effect of attributional target (own child or other child) on attributional dimensions (internal-to-mother, controllable-by-mother) for the mother's causal role in negative behaviour?
2) if so, is that effect moderated by the extent to which the mother sees her friend (i.e., the other mother) as part of her self?
3) are any effects influenced by the level of threat (i.e., the setting) of the child's behaviour?

The analyses thus far have concentrated on the child's responsibility for negative behaviour and the mother's outlook for her child's future. These analyses examine the way in which the mother attributes about her own causal role in the child's behaviour compared to the other mother's causal role in her child's behaviour. The statistical analyses are similar to those presented earlier concerning the child's role in negative behaviour with the exception that there are two (rather than five) attributional dimensions analysed as dependent variables.

To answer the first question, a 2 (attributional target) x 2 (dimension) within-subjects MANOVA was conducted. There was no main effect of attributional target $F(1, 57)=2.97$, $p=.09$ns or dimension $F(1, 57)=2.88$, $p=.09$ns but there was a significant interaction of target and dimension $F(1, 57)=5.19$, $p<.05$. Post-hoc analyses revealed that child's negative behaviours were caused by factors external to the mother concerning her own child and more internal to (the other) mother concerning the other child. There were no differences in the perceived controllability of the behaviour. Figure 11 illustrates these patterns.

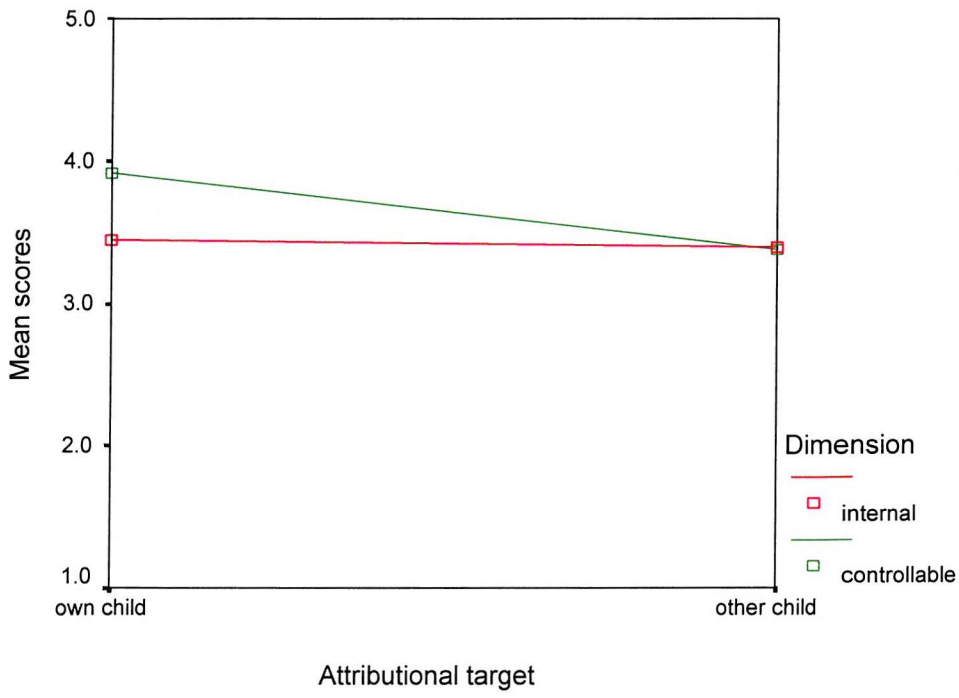


Figure 11. Mean scores on attributional dimensions of internal-to-mother and controllable-by-mother by attributional target.

This analysis answers question 1); there is an effect of attributional target on the attributional dimension of internality for the mother's causal role in negative behaviour. To answer the second question concerning the effect of the extent to which the mother sees the other child's mother as part of herself, the above analysis was repeated introducing the Friend-as-Self scale as a binary (low vs. high) or three-group (high vs. medium vs. low) between-group measure. Neither analysis yielded significant interactions between target and Friend-as-Self scale $F(1,56)=.05$, $p=.09$,ns, $F(1,38)=.30$, $p=.21$,ns respectively. In other words, mothers saw their child's behaviour as caused by factors more external to themselves compared to the other mother and her child, regardless of the extent to which they reported seeing the other mother as part of themselves.

Having established that there was no interaction between mothers' attributions and the extent to which they see the other child's mother as part of themselves, the third question aimed to discover whether any effects are influenced by the level of threat posed by the negative behaviour. To explore whether the Friend-as-Self scale is only influential when threat is high, setting was introduced into the analysis as a between-group factor. That is, do mothers who see the other child's mother as part of themselves rate their own role differently to the other mother's role on one or both of the attributional dimensions when the setting (i.e., level of threat) is manipulated? A 2 (within-subjects, target) x 2 (within-subjects, dimension) x 2 (between-subjects, Friend-as-Self status) x 2 (between-subjects, setting) mixed design MANOVA was conducted using the mean attributional scores as dependent variables. There was no overall main effect of attributional target $F(1, 36)=1.53$,

p=.22,ns or attributional dimension F(1, 36)=1.82, p=.18,ns but a significant interaction between the two F(1, 36)=5.62, p<.02. The patterns remained the same as in the analysis reported previously - mothers rate their own child's behaviour as caused by factors more external to themselves compared to the other mother's causal role in her child's behaviour. Controllability was not affected by attributional target. No other significant interactions were found. In answer to question 3), then, it appears that the level of threat presented in the experimental situation does not affect the magnitude of the mother's bias in favour of herself.

Discussion

Mothers in this study extended an attributional bias to their own child on two dimensions, stability and globality. This replicates the findings of Studies One and Two. Further analysis revealed that these effects interact with the extent to which mothers see their child as a part of themselves - the attributional bias is of greater magnitude for mothers who regard their child as part of themselves than for those who report on the lower end of the scale. In addition, there are a number of interactions of target with Child-as-Self status and threat. Most importantly, when mothers see their child as part of themselves, and the behaviour is presented in a public (high threat) setting, causes for that behaviour are rated as more external and less stable. Furthermore, a new measure was introduced (the Future Judgment Task) which assessed mothers' optimism regarding their own and the other child's future. Mothers consistently and significantly made more optimistic ratings for their own child than for an other child whom they knew well. This supports the attributional measure of bias in that it is not at all dependent upon mothers having knowledge about the other child.

These results are consistent with the hypothesised notion that mothers do extend a self-serving bias (SSB) to their own child and that they do so because they see that own child as part of themselves. This is consistent with much research in the field of social psychology which proposes that individuals who are rated as 'close' or 'significant' sometimes receive the same cognitive privileges (i.e., attributional biases, increased resource allocations, etc.) as one usually applies to self. For example, Nisbett, Caputo, Legant & Marecek (1973, Study 2) found that the longer people had been in a relationship with a close

friend, the less willing they were to make dispositional (i.e., global and stable) attributions about the friend for negative outcomes. Similarly, Goldberg (1981) found that participants made fewer dispositional attributions for people they have spent more time with compared to people they have spent less time with. Prentice (1990) had participants describe various persons in specific situations and found least overlap in descriptions between situations for descriptions of self, next least for a familiar other and most for an unfamiliar other. This suggests that people are making situational attributions for self and those close to self but are understanding those less familiar in terms that are not differentiated by situation. Using a different methodology, Sande, Goethals & Radloff (1988) found that self, and then "liked" friends and then "disliked" friends were progressively less likely to be attributed both poles of pairs of opposite traits (for example, "serious-carefree"). The point here is that for self - and those liked by self - behaviours can vary, even to the extent of representing opposites, according to the situation. But for those distant from self, a single-sided trait description (that is, a dispositional attribution) is quite adequate. Aron et al. (1991, introduction to Study 2) replicated Sande et al's procedure, but compared close with nonclose relationships (as opposed to liking versus disliking). They found choices of both traits (the situational attribution) was more frequent for a friend than for an acquaintance.

These studies imply that individuals will attribute about others in ways which resemble self attributions and that relational closeness mediates this process. Further evidence for this implication is provided by research which shows that in some instances the usual tendency to show self-serving biases is

repressed or reduced when the comparison is between self and a close other (as opposed to a hypothetical other or stranger). Sedikides, Campbell, Reeder & Elliot (1998) examined the impact of relationship closeness on the SSB. They required participant dyads to complete a Relationship Closeness Induction Task (RCIT), a structured self-disclosure task involving mutual disclosure of increasingly personal and sensitive information about oneself. Participants were then asked to perform a 'test of creativity', remaining in either the same dyad (close relationship condition) or in a new dyad (distant relationship condition). After the creativity test, participants received performance feedback (success or failure) that was determined randomly and referred to the partners' combined performance on the test. Finally, participants were asked to rate (under the guarantee of anonymity and confidentiality) who was most responsible for the outcome of the test and who made the greatest positive contribution to the test. The key finding was that the Relationship Type x Feedback Type interaction was significant: distant participants assumed greater responsibility for the dyad's success than for its failure, thus manifesting the SSB. However, close participants took neither greater responsibility for the dyad's success nor lower responsibility for the dyad's failure. The relationship type main effect was also significant regarding the extent to which individuals claimed to have made greater contributions to the positive outcome of the test - close participants reported making a less positive contribution to the test outcome, relative to distant participants.

These results show that self-serving tendencies are suppressed when participants are experimentally induced to feel close to the partner with whom they are working. The same authors

replicated the study using same-sex friends or strangers as dyads in order to examine whether naturally occurring friendships will result in a manifestation of the same (non self-serving) attribution style witnessed in induced relationships (Campbell, Sedikides, Reeder & Elliot, 2000). The findings mirrored those presented in the induced relationship experiment: strangers manifested the SSB whereas friends did not.

One of the possible explanations presented by the authors for this finding is that friends may experience "a unique connection with each other" (p237), and that this connection may include incorporation processes proposed by Aron & Aron's (1997) self-expansion theory. Research which has directly explored that hypothesis has also demonstrated the influence of relational context upon various outcomes (e.g., Agnew, VanLange, Rusbult & Langston, 1998; Aron & Fraley, 1999). In summary, the social psychological literature presents the proposition that an individual's inclusion in the self results in a modification of usual attributional processes.

The present research is concerned with whether mothers extend an SSB to their own child and if so, whether this is because they see their child as part of themselves. The results of the present study suggest that mothers are biased in favour of their own child compared to a familiar other child. Although this issue has not been explored in this way before, one previous study has examined the way that the distinctive parent-child relationship context affects the dynamics of parent-child interactions and is consistent with the results of the present research. Dawber & Kuczynski (1999) asked forty mothers to respond to transgressions involving their own child, their

child's best friend and an unfamiliar child. The transgressions were presented in hypothetical vignettes of situations that were volunteered by mothers in a pilot study to be typical child misbehaviours. Seven vignettes were presented to each mother for three children: their own child, their child's friend and a child they had never met before. They were then asked to describe their affective reaction (how upset they would be), their discipline strategies and their socialisation goals (what they hoped to accomplish through their disciplinary reaction to the transgression) for each child. Mothers reported different affective reactions, disciplinary strategies and different socialisation goals depending on the nature of the relationship with the child. Mothers reported that they would experience more emotional upset, employ more power assertion, teaching and reasoning strategies and have more future-oriented goals for their own child than with either of the unrelated children. Regarding this finding, the authors themselves assert that "a parent cannot be indifferent to a misdeed committed by her own child because it is more likely to have repercussions than a misdeed by an unrelated child. For example, mothers may be more personally invested in their own children's outcomes or more likely to perceive their children's transgressions as a reflection on their competence as socialising agents. Mothers may take a more objective stance regarding an unrelated child's misdeeds because they do not have the same implications for mothers' evaluations of themselves" (p489). This conclusion is precisely the proposition of the present research which sees children's behaviour as having implications for mothers' evaluations of themselves, to the extent that a mother sees her own child as part of herself.

There is one issue embedded in much of the research presented in

support of this proposition and that concerns the direction of causality of this effect - is it because mothers see their children as part of themselves that they are motivated to extend different biases toward them, or is it the extension of different biases toward their child that encourages them to see their child as part of themselves? Whilst the first alternative appears the most intuitively appealing, the present research cannot and did not attempt to answer this question. Only an experimental manipulation of the extent of inclusion of one's child as self would address the question of causality. That is, if one could induce some mothers to include child as self and some mothers not to include child as self prior to the presentation of attributional or unrealistic optimism measures, one could use that manipulation as evidence for a causal effect if indeed differences were still detected. Given the mean scores of the measure of Child-as-Self used in the present study, and assuming that this instrument is a reliable and valid measure of this concept (see Aron & Fraley 1999 for an overview of the effectiveness of this instrument to measure this concept) it appears that mothers do include their child as part of themselves, at the very least, to a fairly substantial level. The question remains, therefore, how is it possible to address the issue of causality given the pre-existent initial level of mothers' inclusion of their child into their self identity?

There are few possible answers to this question in the absence of the possibility of experimental manipulation. However, one plausible compromise would be to conduct a long-term observation of mothers. Longitudinal research could follow mothers from pregnancy and take regular measures of how much they incorporate their child into self over time (this process may start before the child's birth). Then comparisons could be made between high

Child-as-Self and low Child-as-Self mothers on measures used in the present research. This may enable the researcher to identify the order of emergence of inclusion of child as self and attributional explanation for behaviour.

Another possibility for future research would be to examine possible moderating and mediating factors on the variable of inclusion of Child-as-Self. For example, one could compare mothers who rate all of their children equally as part of themselves with mothers that rate each of their own children differentially on the Child-as-Self scale. In-depth interviews with both sets of mothers may reveal consistent patterns regarding why some children are rated as highly included in the self and why some are rated as barely included in the self. These patterns could then be converted into hypotheses and made subject to empirical scrutiny. For example, if mothers consistently report that daughters are more often included in the self than sons (i.e., child's sex is a moderating factor), one could conduct a study with mothers of twin pairs. One group of mothers would have same-sex twins and one group of mothers would have different-sex twins. Mothers would be asked to complete the same array of questionnaires as presented to mothers in the present research, but the 'own' and 'other' child would actually be 'twin 1' and 'twin 2'. The study would compare attributional explanations of mothers of different sex twins with attributional explanations of same sex twins. If it is simply that own children are rated differently to other children on such measures, one would not expect a difference in favour of 'twin 1' over 'twin 2'. However, if child's sex is a moderating factor, one would predict that there would be differences in the rating of Child-as-Self scale and subsequently a greater attributional bias in favour of 'twin 1'

over 'twin 2' when 'twin 1' is a girl and 'twin 2' is a boy. Alternative moderators or mediators of Child-as-Self status could be introduced to studies to explore their impact on biases.

Further research is warranted to replicate and refine the results obtained in the present study and in order to confirm the causal role of threat in the manifestation of self-serving biases, that research should aim to manipulate experimentally the threat provoked by own child's negative behaviour. One question this prompts is how experimental research can create conditions in which threat to mother is removed. That is, does merely asking mothers to answer questions about their child's negative behaviour in itself pose a threat to the mother that makes it difficult to introduce a 'no threat' condition? Bradley (1981) argues that it is the evaluation by others of one's performance that is the central theoretical factor underlying the effects of publicity and it is this evaluation that elevates the level of threat to self. Therefore, in the present study, although mothers in the 'private' or low-threat condition were explaining children's behaviour which was not public, they may still have felt threatened by the prospect that their responses would be evaluated by the experimenter. In fact, given that all mothers were subject to the same methodology (self completion of questionnaires), there is no reason to suppose that mothers in the 'low threat' condition would be any less threatened by the prospect of the evaluation of their answers than mothers in the 'high threat' condition. Seen in this way, the lack of statistical significance between the private and the public groups on the threat validation item ("how upset would you be by this behaviour?") makes more sense - mothers would be motivated to say they were upset at such behaviour because, in effect, the

experimenter becomes the audience, so the effect of setting is overruled. The data showed a ceiling effect - over 80% of mothers rated that item on the highest score, regardless of the condition to which they were assigned. That there was still an effect of setting on attributional scores shows that mothers imagining their child misbehaving in public are exposed to even more threat to self, but future research does need to consider ways in which to create distinctively low versus high threat conditions.

Speculatively, there are a number of possible avenues of exploration for this issue. An obvious solution may be to increase the anonymity of mothers' responses to attributional questions - if Study Three was replicated using an on-line completion procedure where mothers responded to a computer screen which did not request personal details (such as their name or their child's name), mothers may feel less like their answers are being evaluated than when they receive a personally addressed letter inviting them to take part in a psychological research study on parenting. Alternatively, one could manipulate the consequences of the negative behaviour so that in one condition the consequences are more threatening for the mother and in one condition they are not. For example, if a vignette concerned a child's misbehaviour at school, the high threat condition could witness the child being expelled from the school whereas the low threat condition could see the child being reprimanded. Finally, one could ask mothers to explain their child's negative behaviour either to a good friend or to a stranger, with the assumption that an evaluation by a close friend would be less threatening than one by a stranger. The question remains whether the report of human self-esteem is so delicate that even manipulations such as these would not provide

a clear enough boundary to fully establish the causal role of threat on mothers' attributions for their child's transgressions. Further research could answer this question.

Integrated discussion

The first study of this thesis demonstrated a main effect of attributional target on causal explanations for negative behaviours on two attributional dimensions - stability and globality - but not on the dimensions of internality, controllability or universality. Own children's behaviours were rated as less stable and more situation-specific than were equivalent behaviours displayed by other children. When mothers reported elevated symptoms of depression, the tendency to see own child's behaviour as more situation-specific than other children's behaviour was reduced in one analysis, but depression did not significantly affect the magnitude of the difference in scores on the dimension of stability. The difference demonstrated on these two dimensions was not significantly affected by the child's behavioural status.

The second study showed a main effect of attributional target on causal explanations for negative behaviours on five attributional dimensions - internal-to-child, stable, global, internal-to-mother and controllable-by-mother. No main effects of attributional target were demonstrated on the attributional dimensions of controllable-by-child or universality. Own child's negative behaviours were rated as less internal, less stable, less global, less internal-to-mother and less controllable-by-mother than other child's negative behaviour. This pattern was demonstrated regardless of the extent of the information presented in association with the other child's behaviour.

There were no between-subjects effects of mother's self-esteem, sense of parenting efficacy or parenting satisfaction on any of the attributional dimensions. However, some regression analyses revealed an effect of child's behavioural status on the

difference between scores for own and other child's ratings. Specifically, as mothers increasingly report their child's behaviour as difficult to manage so they rate the cause of their child's misbehaviour as more global, less internal and less controllable by themselves.

Mothers in the final study extended an attributional bias to their own child on two dimensions, stability and globality. This replicates the findings of Studies One and Two. Further analysis revealed that these effects interact with the extent to which mothers see their child as a part of themselves - the attributional bias is of greater magnitude for mothers who regard their child as part of themselves than for those who report on the lower end of the scale. In addition, there are a number of interactions of target with Child-as-Self status and threat. Most importantly, when mothers see their child as part of themselves, and the behaviour is presented in a public (high threat) setting, causes for that behaviour are rated as more external and less stable. Furthermore, a new measure was introduced (the Future Judgment Task) which assessed mothers' optimism regarding their own and the other child's future. Mothers consistently and significantly made more optimistic ratings for their own child than for an other child whom they knew well.

In summary, the first study established the presence of an attributional bias in explanations for children's difficult behaviours. The second study aimed to rule out the proposition that this is a reflection of differences in information regarding mothers' own and other children. The final study built on these findings, further excluded the 'informational hypothesis' and provided evidence for a motivational mechanism

underpinning the extension of this bias. In short, mothers do display a child-serving bias.

Whatever the factors that influence the extent to which mothers demonstrate a child-serving bias, it is clear from the present research and the body of studies with which it is consistent that mothers do extend the same attributional privileges to their own child compared to an other (even well-known and liked) other child, when their own child is rated as part of themselves. What is not clear so far is the underlying mechanism through which that bias operates; that is, does a mother demonstrate the child-serving bias in order to protect and maintain a positive self-esteem or is it a result of different cognitive processes that are employed when asked to account for different children's behaviours?

That individuals generally tend to take more than their fair share of responsibility for positive outcomes and less than their fair share of responsibility for negative outcomes is a relatively undisputed phenomenon in psychological research (Miller & Ross, 1975; Bradley, 1978; Weiner, 1973; Heider, 1958, Campbell & Sedikides, 1999). What has been the subject of much debate is the underlying mechanism that produces this attributional bias. Initial labels of this principle, such as "ego-defensive", "ego-protective" or "ego-biased" attributions (Heider, 1958; Kelley, 1967; Weiner, 1973) reflected the general assumption that this bias is predicated upon the needs of individuals to maintain or protect a positive self-esteem. However, some of the interpretations of the research upon which this assumption rests was challenged by Miller & Ross in their provocative 1975 paper which recast much of the existent data in a cognitive framework.

Firstly, they argued that some results can be explained equally well by the role of expectation as by the role of self-protection. They cite research which suggests that an unexpected outcome on a task - be it success or failure - is more likely to be attributed to external factors than an expected outcome (Feather, 1969; Feather & Simon, 1971, cited in Miller & Ross, 1975). That is, that expectations of performance level are more important determinants of attributions of causality than the actual level of performance attained. In addition, they claim that individuals tend to expect success rather than failure (citing the same studies). Therefore, the tendency for people to make ad-hoc self-ascriptions for successful task performances is more likely a reflection of their expectations of success than a need to protect their self-esteem.

Secondly, they describe a paradigm in which subjects (e.g., teachers) are asked to instruct another person (e.g., pupils) on how to perform a particular task. Each teacher would teach two pupils a mathematical concept and Pupil A would do well, but Pupil B would fail. Then teachers would have to teach another mathematical concept to the same pupils and pupil A would continue to do well, but Pupil B would either continue to do badly or improve to do as well as Pupil A. Teachers' attributions for the pupils' performance are then assessed, and usually subjects will ascribe failure to the target and success to themselves (e.g., Johnson, Feigenbaum & Weiby, 1964, cited in Miller & Ross, 1975). While this study is usually cited as a demonstration of a self-serving bias, Miller & Ross offer a non-motivational explanation based on Kelley's (1971) covariation principle. According to this principle, "an effect is attributed to the one of its possible causes with which, over time, it

covaries" (p.3). Within the present paradigm, therefore, it is conceivable that insofar as teachers tried harder or varied their instruction to Pupil B after their poor initial performance, the informational pattern available to the teacher would show a strong positive covariation between her own behaviour and the improving pupil, but a negative or noncovariance between her own behaviour and that of the consistently poor pupil. By the covariation principle, the former would warrant a self-attribution whereas the latter would not.

Finally, Miller & Ross argue that "people do not understand the meaning of statistical contingency" (p218), and this leads them to perceive a greater relationship between behaviour and positive outcomes than between behaviour and negative outcomes. They offer support for this cognitive explanation of differences in attributions for negative and positive outcomes, citing two studies which show that subjects base their judgments of the contingency between behaviour and outcome on the basis of the frequency of the positive outcomes rather than on any actual degree of contingency present (Smedslund, 1963; Jenkins & Ward, 1965, cited in Miller & Ross, 1975).

After this review, Ross went on with other colleagues to conduct a number of studies that supported the notion of a cognitive basis for differences in attributions for positive and negative outcomes (e.g., Ross, Amabile & Steinmetz, 1977; Ross & Sicoly, 1979). As well as these studies that supported the cognitive reformulation of attributional bias theory, Miller & Ross's review prompted many advocates of a motivational explanation to re-examine and refine their position. One of the most critical evaluations of the cognitive position was presented by Bradley

(1978), who addressed many of the issues raised by Miller & Ross and broadened the motivational explanation for attributional bias in light of the new research prompted by the debate.

The first issue Bradley addresses concerns the role of expectation on a subject's tendency to display an attributional bias. The cognitive argument stated that an unexpected outcome on a task - be it success or failure - is more likely to be attributed to external factors than an unexpected outcome (Feather, 1969; Feather & Simon, 1971, cited in Miller & Ross, 1975). However, Bradley argues that while these studies provided results seemingly inconsistent with a self-serving hypothesis, subjects were conscious that their test behaviour was being evaluated by the experimenter and that it was the major focus of study. Moreover, each subject's performance on practice and test items was publicly announced in the presence of another subject. Also, following the test each subject assigned causal responsibility for the performance outcomes of both self and other. Given these features and subjects' possible beliefs that the experimenter would probably compare their causal attributions with those made by the other subject, it may be argued that "subjects tended to respond in ways that they thought would be socially acceptable to the experimenter (humility, generosity)" (Feather & Simon, 1971, p.186; cited in Bradley, 1978, p.66). Viewed in this way, both defensive and seemingly counter-defensive attributions could (a) be construed as attempts to gain approval from others and/or avoid public embarrassment and (b) provide support for a self-serving attributional bias.

The second issue Bradley addressed was concerned with Miller & Ross's suggestion that when there is a positive covariation

between subjects' inputs (e.g., choices, expenditure of effort) and outcomes, subjects will assume that their inputs caused their outcomes and will make self-attributions for the outcomes and that such covariation may be more apparent for success than for failure. However, Bradley argues that in all of the studies cited by Miller & Ross as subject to this rival explanation, "there is no direct or indirect evidence of differential expenditure of effort or perception between behaviour and outcome" (p.68). Other studies have checked for possible variations in actual or perceived effort across experimental conditions (Federoff & Harvey, 1976, cited in Bradley, 1978); made comparisons within success and failure conditions where response-outcome covariation would not be expected to differ (Sicoly & Ross, 1977) or introduced instructions designed to vary levels of self-esteem arousal after the experimental task was completed (Miller, 1976). These studies, which are not subject to reinterpretation in terms of response-outcome covariation, have found results consistent with defensive attributional processes.

Finally, Bradley re-examines the argument which suggests that people misunderstand the concept of contingency and, as a result, associate control primarily with the desired (or positive) outcome. Bradley cites a number of methodological shortcomings of the studies upon which this assertion is made, with the central criticism being that the experimental context of the studies cited (Smedslund, 1963; Jenkins & Ward, 1965, cited in Miller & Ross, 1975) had noting to do with interpersonal situations. Specifically, subjects were asked to push one of two buttons and then one of two possible pre-programmed outcomes was illuminated on a display panel. After each time of doing this, subjects were asked to rate how much

personal control they had over the outcome. He concluded by suggesting that "more theoretical clarification and experimentation is needed in order to determine the actual explanatory power and validity of Miller & Ross's alternative interpretations" (p68), and indeed the debate did stimulate much empirical investigation. Although not a definitive conclusion, many studies did find evidence for the motivational or self-serving explanation of the attribution process (e.g., Larson, 1977; Zuckerman, 1978; Burger, 1981, Gibbins & Walker, 1996; Shrauger, Ram, Greninger & Mariano, 1996; Campbell & Sedikides, 1999).

Of particular interest as far as the present research is concerned are those papers which address the relative importance of three factors on attributions: firstly, the amount of information possessed about self and other (Shrauger et al, 1996); secondly, the perceived similarity between self and other (Burger, 1981) and thirdly, the role of self-threat (Campbell & Sedikides, 1999).

Study Three aimed to rule out the possibility that differences in attributions were merely a reflection of differences in the amount of information possessed about one's own and an other child. It did this in two ways. Firstly, the 'other' child was a child that was well-known to the mother and secondly, a task was introduced (the Future Judgment Task) - the completion of which did not depend on mothers requiring information about their own or the other child. As summarised earlier, mothers still offered self-serving responses on both measures, despite the equality between the levels of information held about the two children.

This finding is consistent with related work by Shrauger et al

(1996) who examined the relative accuracy of self-appraisals and appraisals made by others who know a person well and to see whether this familiarity influences the relative accuracy of self versus others' judgments. They argue that when a person is asked to make a judgment about a someone else in a certain event they use evidence about both the event and the individual being judged. Therefore, when one is making judgments about a close friend or well-known other, appraisals of their behaviour should be more accurate than when making judgments about a less familiar person. In addition, self-appraisals and appraisals of self by a well-known other should be more highly correlated than self-appraisals and appraisals of self by an unknown other. What Shrauger et al found was that the levels of information available about other people did not determine the accuracy of their appraisals about the causes of behaviour. In other words, if Subject A and Subject B (who knew each other well) both accurately described Subject A's behaviour, this did not translate into a high correlation between Subject A and Subject B's explanations for that behaviour.

This mirrors exactly the pattern found in Study Three. There were significant correlations between Mother A and Mother B's scores for Child A on the Strength & Difficulties Questionnaire (SDQ), thus both mothers were reporting similar levels of behavioural disturbance in that child. However, the subsequent explanations for Child A's behaviour in the Attributions Questionnaire were different for Mother A and Mother B - Mother A was more favourable, or biased, in her attributions.

Study Three also hypothesised that one of those factors which encourages mothers to offer different attributions for own child and other child was the inclusion of their child as part of

themselves. The data showed an interaction of attributional bias and Child-as-Self status as well as an interaction of unrealistic optimism and Child-as-Self status. In both cases, mothers were more favourable about their own child when they had scored above the 70th percentile on the Child-as-Self Scale. This is consistent with Burger's (1981) meta-analysis which argued for a motivational model of the SSB because subject's similarity with a target accident perpetrator moderated the amount of responsibility attributed to the perpetrator. That is, when a subject was personally and situationally similar to the perpetrator, they tended to offer more specific and situational attributions when accident severity increased whereas the opposite was true for perpetrators perceived as dissimilar. The explanation for this moderating effect is that attributing a severe accident to the perpetrator would tend to implicate the perceiver as the source of a similar accident, should one happen in the future. This would be more threatening to the perceiver's self-esteem, thus they offer more favourable explanations in order to protect their self-esteem from this elevated level of threat. On this basis, it could be argued that mothers who see their child as part of themselves could feel that their child is more similar to themselves than is the other child, whereas mothers who do not score highly on this measure may see more similarity between the two children themselves. This would lower the level of threat to self usually provoked by misbehaviour demonstrated by own child.

As has been discussed elsewhere (p.102), threat to self has been identified as an important moderator of the self-serving bias (Campbell & Sedikides, 1999) and Study Three aimed to examine experimentally its effect on attributions for negative behaviour. Consistent with the literature that recognises the

effect of publicity on attributional biases (Dodge & Somberg, 1987; Lerner & Tetlock, 1999; Juvonen & Murdock, 1993; Weary, Harvey, Schweiger, Olson & Pritchard, 1982), half of the subjects in Study Three offered explanations for child's negative behaviour that occurred in a public setting (high threat) whereas half offered explanations for misbehaviour witnessed only by the mother (low threat). The analyses revealed effects of this manipulation on attributional dimensions showing that when an own child's negative behaviour is displayed in public, causes for that behaviour become even more self-serving (i.e., favourable) than when identical behaviours happen in private settings (but only when the child is seen as part of the self).

Taken together, the data from Studies One, Two and Three contribute to the debate by lending support to the motivational, rather than the cognitive, model of attributional bias. The role of information about the other child does not affect the demonstration of self-serving appraisals; the extent to which own child is seen as part of self does affect attributions and optimism about own child's future and elevated levels of threat in a situation magnify the bias in explanations offered to account for misbehaviour.

As well as the theoretical importance of these findings, they are significant because of the way in which attributions affect subsequent parenting behaviour. If mothers are consistently biased in their attributions for their own child's behaviour compared with those for another child, what impact might this have on their parenting style and approach? Miller's (1995) review of the literature highlights possible effects of parents' attributions, including their impact on affective and

behavioural responses to child behaviour. He cites Dix & Grusec's (1985) theoretical framework for understanding the way in which attributions affect parental responses, arguing that negative behaviours will be especially upsetting to parents when the behaviours are judged to be internal to the child, stable and global (this framework has been discussed in depth in the introduction of this thesis, see page 22).

This argument is supported by Geller & Johnston's (1995) study that examined contributions of situation-specific attributions and general parenting attitudes in predicting mothers' responses to child behaviours. In their study, they assessed mothers' attributions for specific child behaviours by asking mothers to imagine various situations in which their child fails to comply with their request. As well as ratings of internality, controllability, stability and globality mothers were asked for their anticipated affective response ("how upset would you be by this situation?") and behavioural response ("how likely would you be to do something about this behaviour?") to the described misbehaviour. They found that mothers' attribution ratings of the child's role in the misbehaviour were significantly related to the intensity of their affective and behavioural responses to it. This finding is consistent with other research. For example, Dix and colleagues have conducted eight studies including measures of both parent affect and parent behaviour in response to depicted negative child behaviours (Dix & Lochman, 1990; Dix & Reinhold, 1991; Dix et al, 1986, 1989, 1990; Reinhold & Lochman, 1991). The methodology in all of the studies is verbal self-report of probable response, generally via ratings scales. The general conclusion from these studies is that attributions do influence both parental affect and parental behaviour. When parents make a dispositional, internal-to-child attribution for

negative behaviour, they are more upset by it and feel that it is more important to respond to it. Attributions of competence and responsibility are similarly associated with greater negative affect and stronger behavioural response. Parents are more upset by an immediate act of noncompliance than a later act - presumably because the former is seen as more intentional; they are also more upset when knowledge of how one should behave is explicitly present than when knowledge is absent.

These studies have tended to use single items to measure the mothers' affective and behavioural responses to difficult behaviour, but other studies have used more specific, empirically derived items and examined the extent to which certain attributional styles relate to different parenting reactions. For example, Nix, Pinderhughes, Dodge, Bates, Pettit & McFayden-Ketchum (1999) examined relations among mothers' attribution tendencies and subsequent discipline practices. Specifically, they were interested in whether a more hostile attributional style predicted harsher discipline parenting responses. They measured the former by dividing items from the Parenting Possibilities Questionnaire (PPQ; Pettit et al, 1988) into three content areas and used them as indicators of the latent variable "mothers' hostile attribution tendencies". The PPQ consisted of nine vignettes of children's ambiguous problem behaviours. After reading each vignette, mothers rated their confidence, on 4-point Likert scales, in a hostile and in a benign explanation of why the child might have acted in such a manner. Each mother's rating of the likelihood of the benign attribution was subtracted from the mother's rating of the likelihood of the hostile attribution so that a higher difference score indicated a greater hostile attribution tendency for that vignette. Two measures from independent

informants were used as indicators of the mothers' discipline practices. The first measure involved two ratings of harshness of discipline by an interviewer, based on semi-structured discussions in which mothers had described the strategies they had used to socialise their child. The second measure was spouses' reports of mothers' behaviours on a revised version of the Conflict Tactics Scale (CTS; Straus, 1979). Typical items of the CTS include "argue heatedly with child, but stop short of yelling", "stomped out of the room or house" and "spanked the child". Results of structural equation models demonstrated that mothers' hostile attribution tendencies predicted children's future externalising behaviour problems at school and that a large proportion of this relation was mediated by mothers' harsh discipline practices. This analysis illustrates the influence of hostile attributions on parental responses to behaviour and their role as mediators in subsequent child behaviours. MacKinnon-Lewis, Lamb, Arbuckle, Baradaran & Volling (1992) also found that mothers who offered a hostile attributional explanation for their child's behaviour also displayed increased aggressiveness in their interactions with their child.

All of this evidence demonstrates that when mothers' attributions for child's negative behaviour are less favourable (i.e., the child's behaviour is seen as internal to the child, stable and global), their reactions to that behaviour are those which the literature suggests are less adaptive. Is it also true therefore that the opposite attributional style is associated with more adaptive parenting strategies? In other words, is the child-serving bias demonstrated by mothers in the present research a potentially helpful and adaptive parenting mechanism?

One can speculate that an optimistic attributional style may be

adaptive for parents. By viewing negative behaviour as unstable and situation-specific, parents should feel more empowered to intervene and control a child's behaviour in contrast to behaviour believed to reflect stable and global factors which parents may feel less able to change. Baden & Howe's (1992) study supports this proposition - where parents regarded their child's difficult behaviour as stable, global and uncontrollable, they were also less likely to see their parenting as effective. Miller (1995) also suggests that parents who make optimistic attributions will be "most likely to persist in helping their children overcome problems, as well as most likely to transmit a positive, development-enhancing pattern of attributions to the children" (p1578). Furthermore, Goodnow, Knight & Cashmore (1986) and Gretarsson & Gelfand (1998) have suggested that a positive bias in attributions for child behaviours may be adaptive in the parenting process. However, none of these studies have examined attributions for own child in comparison to an other child, and one might speculate that it is the relative magnitude of attributional bias that might determine subsequent behaviours. Are there potential differences between mothers who demonstrate a substantial bias in favour of their own child ("this behaviour is unstable and specific in my child, but stable and global in other children") and mothers who do not ("the cause of this behaviour in my child is as stable and global as it is in other children")? Whilst the present data cannot answer that question directly, speculations about three clinically relevant areas could be explored in future research. Firstly, does the magnitude of bias demonstrated by the mother have implications for her child's behaviour? Secondly, does it have implications for their relationship? Finally, does a mother's attributional bias about her child affect her own behaviour? Of course, these three areas

are not mutually exclusive - each affects and is affected by the other two areas, and all may be influenced in different ways by the demonstration (or otherwise) of a maternal attributional bias.

Considering these areas in combination, we have already seen that mothers' attributions for children's behaviour affect behavioural and emotional responses to that behaviour, which in turn affect children's behaviour and that those influences are bidirectional. Study Two also demonstrated the association between mothers' satisfaction and the tendency to demonstrate a child-serving bias. The more satisfied mothers demonstrated a greater bias on the dimensions of stability and internality-to-mother, and although we cannot establish causality of effects with that data, it shows one way in which an attributional bias may affect mothers' affect and behaviour. Another way in which attributions, or more specifically a child-serving bias, may affect mothers' behaviour is in regard to intervention and treatment for behavioural difficulties. Phares, Ehrbar & Lum (1996) argue that it is important for clinicians to assess parents' perceptions of responsibility for their children's emotional and/or behavioural problems because of the way in which these affect parental perceptions of different treatment suitability.

Research in the area of expressed emotion has identified the construct of emotional over-involvement (characterised by over-protectiveness and lack of objectivity regarding a child's difficulties) as one which significantly affects parent-child interactions (e.g., see Vaughn & Leff, 1991; Bost, Vaughn, Washington, Cielinski & Bradbard, 1998). One might suppose, therefore, that an inaccurate perception of the causes of one's

child's difficulties will influence help-seeking behaviour. For example, if the magnitude of attributional bias concerning a difficult behaviour is large ("this behaviour in my child is caused by an unstable and specific cause, but in other children it is caused by more permanent and wide-ranging factors"), one might predict that such a mother would not seek help for her child's behaviour in the way that a less biased mother might ("this behaviour in my child is caused by something stable and global, just as it is in other children"). One might also predict that mothers who display a reversal of the bias ("this behaviour in my child is caused by stable and global factors, whereas in other children it is temporary and specific") may tend to seek help more often than is potentially necessary.

One crucial consideration in this proposition is the level of behavioural disturbance displayed by the child. The present research deliberately described behaviours that are reasonably familiar to parents and regarded as common to children of their child's age group. To display a relative bias in favour of own child concerning such behaviour seems adaptive to some extent, assuming the existence of the behaviour is not pathological for either the child or parent. However, when children's behaviours start to reach clinically established levels of difficulty, an attributional bias in favour of one's own child may be less adaptive. For example, where behaviour is symptomatic of Attention Deficit/Hyperactivity Disorder (AD/HD) - a relatively stable and global disorder - mothers are more likely to seek help when they are not displaying an attributional bias.

Research based on other disorders supports this suggestion, although it does not compare explanations for own versus other children's behaviours. Butler, Brewin & Forsythe (1986)

investigated attributions made by mothers of eneuretic children. The mothers typically attributed eneuresis to factors that were internal to the child, stable, specific and uncontrollable. Likewise, Compas, Adelman, Freundl, Nelson & Taylor (1982) found that parents tended to attribute behavioural difficulties to factors within the child. Stratton (Stratton et al, 1986; Stratton & Swaffer, 1988; Stratton, Preston-Shoot & Hanks, 1990) found that families come to psychological therapy with a perception of the problem as located in an individual, uncontrollable, unchangeable, blameworthy and arising through linear pathways of cause and effect (as opposed to reciprocal or circular paths of influence). Munton & Stratton (1990) have also demonstrated that families in therapy tend to attribute the causes of negative events to stable, global, internal and personal causes. Watson (1986) showed that parents attending a family therapy clinic most commonly attributed the cause of emotional disturbance in their child to something within the child, either to the child's nature or to some organic problem such as an illness, birth trauma or food allergy. What all of these studies show is that parents of children with psychological difficulties tend to attribute these difficulties to internal, stable and global features of the child. That is, they do not display the attributional bias typical in mothers of children without these difficulties. They were unlikely to be in the therapeutic or intervention study described (where subjects are recruited from ongoing parent training or family therapy programmes) if they held a biased (external, unstable, specific) view of their child's behaviour. Given the success of targeted parent intervention and therapy programmes (e.g., Webster-Stratton, Kolpacoff & Hollinsworth, 1988; Webster-Stratton, 1984; Goddard & Miller, 1993; and see Patterson, 1995 for a review of parent-intervention programmes), a lack of

attributional bias seems adaptive for mothers whose children are seriously behaviourally or emotionally disturbed.

The paradox at this point is that many successful parent intervention and family therapy programmes recognise the need to help parents examine - and sometimes adjust - their beliefs about the causes of their child's behaviour (see March & Harris, 1996; and Patterson, 1995 for reviews of the methods of parent intervention and family therapy studies). Specifically, mothers are encouraged to address their cognitions and perceptions of the causes of their child's behaviour and to reframe them with the possibility that the behaviour is amenable to change and is not necessarily permanent. In other words, mothers are gently reintroduced to the attributional outlooks that are more characteristic of attributionally biased mothers.

This paints quite a fascinating and potentially complex picture of the way that an attributional bias may enhance or inhibit the mother-child relationship. One theme of future research could be to explore the sequence of events or the directions of causality of the patterns of behaviour and attributions. For example, is it a mother's initial lack of attributional bias that influences her parenting behaviour that subsequently affects the child's behaviour which reinforces the mother's attributional style which leads to help-seeking behaviour? Or does a child's persistently difficult behaviour diminish an otherwise pre-existent attributional bias which affects parenting behaviour, influencing the child's behaviour resulting in help-seeking behaviour on the part of the mother? Is some level of bias adaptive in some situations (e.g., when behavioural disturbance is low) and less adaptive in other circumstances? What are the contributions of an attributional bias to child's behaviour,

mother's behaviour and the relationship between them?

These questions concerning causality and potentially optimum levels of attributional bias cannot be answered by the studies described nor the data presented in this thesis. Future research in this field should prioritise the relative importance of different research foci for what is clear is that it is mothers without an attributional bias in favour of their children that are the ones seeking and accepting intervention and remedial programmes. These mothers are dissatisfied with their child's behaviour and that dissatisfaction with the child is associated with their attributions. Study Two also demonstrated the association between mothers' satisfaction and the tendency to demonstrate a child-serving bias. The more satisfied mothers demonstrated a greater bias on the dimensions of stability and internality-to-mother, and although we cannot establish causality of effects with that data, it shows the importance of attributional biases. Given the mediating role of attributions between child disorder and relationship dissatisfaction demonstrated by Sacco & Murray (1997), it is important to understand exactly how an attributional bias may help or hinder parents in fulfilling their role most usefully. If it is dissatisfied mothers (those not displaying an attributional bias) who are the ones seeking and accepting clinical help, and that clinical help improves the quality of the relationship and objective behavioural outcomes, it may be worth considering the possibility that these mothers are more accurate in their perceptions of and attributions for their child's difficulties.

One of the limitations of the present studies is that the data are specific to mothers and one cannot assume that they generalise to fathers. It would be interesting to establish the

influence of differences between mothers and fathers on help-seeking behaviour for child's difficulties. For example, if mothers demonstrate an attributional bias to a greater extent than fathers, the implication would be that fathers would be more likely to accept or seek clinical help. Future research could aim to establish the relative accuracy of mothers' vs. fathers' explanations for their child's behaviour.

The accuracy of mothers' attributions, or how likely it is that the causal explanation offered for a child's behaviour genuinely captures the actual cause of that child's behaviour, is a whole other area of debate. So far, much of the discussion presupposes that mothers' reports reflect accurately their perceptions of the causes of behaviour, but a clinical setting may exacerbate a mother's tendency to distort her perceptions of the causes of her child's behaviour. Consistent with the motivational model of attributional bias that argues for the moderating effects of self-threat on an attributional bias, a typical clinical interview may influence the demonstration of an attributional bias by increasing or decreasing the level of threat posed to the mother. It may increase self-threat as the status of the clinician might intimidate the mother, or that status could have an alleviating effect on threat as mothers feel better understood or relieved at their difficulties being taken seriously by a "professional". It has already been suggested that future research could examine the differences in the demonstration of attributional bias according to whom the mother is explaining the child's behaviour. The present proposition adds weight to the call for further research in that area, particularly with clinical populations. For example, for mothers with children with higher levels of behavioural disturbance, how might their explanations differ when offered to a clinician

versus offered to a close friend? Furthermore, if differences were detected - that is in one situation mothers offer a cause that is different to the cause offered in an other situation - which of the two causes is more likely to reflect the genuine or actual cause of the behaviour?

Attribution theory is concerned explicitly with the explanations offered for different behaviours and situations rather than the actual underlying causes for that behaviour themselves (Heider, 1944; Weiner, 1974; Kelley, 1967; Jones & Davis, 1965). However, the accuracy of attributions is an area that has been explored by Lipe (1991) who re-evaluated the main attribution models in light of the concept of counterfactual reasoning. Lipe's proposed model of the attribution process involves people formulating a hypothesised cause for an event and then assessing the strength of this hypothesis before considering alternative explanations for the event. She presents a framework in which three of the most prevalent attribution models (Kelley, 1967; Weiner, 1974; Jones & Davis, 1965) are reconsidered in terms of how much counterfactual information is available to the attributor. The example she presents initially considers two events: 1) the opera singer hit a particularly high note. At that instant a crystal goblet shattered. 2) the opera singer hit a particularly high note. At the same instant a table in the audience was bumped, and a crystal goblet fell onto a plate. The goblet shattered. She suggests that the cause of the goblet's shattering would likely be presumed as the opera singer's high note in the first scenario and that the cause would be less clear in the second scenario where there is an alternative explanation. Thus, the question "would the goblet have shattered if the opera singer had not sung the high note?" would be answered differently according to the information available -

this is an example of the counterfactual reasoning she argues underlies the attribution process.

The implication from Lipe's review is that people will offer more accurate attributions as their knowledge of alternative explanations increases. With respect to the present study, this is an interesting implication as it would predict that increased knowledge about a person or event would result in more accurate attributions. However, as we have seen, when mothers are explaining the behaviour of their own child (who they presumably know very well), they tend to offer consistently favourable explanations. This could mean that favourable, or biased, attributions are actually more accurate or it could mean that their relationship to the child overrides this possible tendency to take into account less self-serving explanations, as argued by the motivational model. One element of the data that supports this latter view is the similarity of the ratings of an individual child by both its mother and its mother's friend. That is, one child's behaviour is recognised and rated equally by two informants (i.e., both are "accurate" in their observations of negative behaviour), but the explanations for that behaviour vary significantly according to the relationship the informant has with that child. If there is a genuine underlying cause for the negative behaviour being explained, both informants cannot be "accurate". At worst, both are incorrect in their perceptions of the cause of the behaviour and at best, one informant is more accurate than the other in their judgment of the cause of the behaviour. Therefore "accuracy" cannot be simply a function of knowledge of the person or event being explained. The present studies were not conducted to establish the accuracy with which mothers explain their child's behaviour, and the methodology adopted here is not appropriate

to address that issue. Future research could examine this issue, and include other methods to determine how accurate mothers are in their explanations of their child's negative behaviour.

One method that would contribute to the understanding of this field is observation. By observing mother-child interactions and recording the mother's spontaneous attributions offered for demonstrations of difficult behaviour by the child, research could ascertain two things. Firstly, the attributions offered spontaneously may be less prone to the potentially elevated levels of threat inherent in a prompted questionnaire, thus they may offer a more valid representation of what mothers really feel. Secondly, observers could look at the relationship between the child's behaviour and the potential causes offered for it and more objectively establish the accuracy of those attributions. Bugental, Johnston, New & Silvester (1998) argue that there are different advantages to creating measurement situations that either assess spontaneous attributions (such as the LACS, Stratton et al, 1988), that are based on parent-generated attributions (as used by Bugental et al, 1989) or that involve eliciting stimuli that would ordinarily foster attributional activity, including vignette questionnaires as adopted in the present studies. They argue that analysis of attributions generated during discourse or in response to open-ended questions, "although having advantages for the assessment of spontaneous attributions and a wide range of applicability, do have the disadvantage of potential non-comparability across respondents" (p.475). This is because some respondents may generate rather more attributional activity than their less talkative counterparts. Whether a difference in reported attributions reflects a true variation in the amount and type of attributional processing would remain unknown. As such, perhaps

the way forward is a multi-method approach to the understanding of mother's attributions and, in particular, the demonstration of a bias. Observation plus questionnaires could be more informative than either method alone. Certainly, the issue of shared method variance which arises when the same respondents complete multiple measures - as is the case with the present studies - could be addressed by including multiple informants about a child in one study design. For example, as well as mothers, fathers and siblings could complete attributional questionnaires about a target child versus a known (but unrelated) other. This would be interesting for two reasons. Firstly, multiple informants about one target child would address the issue of shared method variance raised earlier. In addition, however, it would tell us also about the generalisability of the findings of this thesis.

It has been established that mothers who include their child as part of themselves extend to them a bias that mirrors the self-serving bias. This is consistent with research using romantic and platonic adult relationships, but does the principle go beyond these relationships and is it characteristic of any dyad where the other is regarded as part of self? Do fathers see their child as part of themselves and if so, will they demonstrate a child-serving bias to the same extent that mothers do? Similarly, do siblings include each other in the self and extend an attributional bias to each other and if so, at what age and under what circumstances would this emerge? These are questions that are amenable to empirical scrutiny and well-developed experimental designs could identify how and when individuals extend an attributional bias to another person.

These and other suggestions for future research have been

proposed and they would expand and build upon the present findings which are limited in their ability to answer all of the questions raised by them. The generalisability of these findings to fathers has already been raised as a matter of interest (see p.172 and above) and future research with mothers of children of different age groups could explore whether this attributional bias is stable or amenable to change as the child's age changes. Cultural differences may also emerge according to differences in expectations of parents of different countries (see Bornstein et al., 1996; Bornstein et al., 1998) and the present data does little to examine this issue. Finally, there is the possibility that the mothers who chose to take part in this research have a qualitatively different relationship with their child which affects the demonstration of an attributional bias and one avenue for future research would be to establish reasons for non-participation in maternal attributional investigation.

Final conclusion

The mother-child relationship is one of the most widely explored in developmental psychology and the understanding of attributional processes is one of the most heavily researched in social psychology. Clinical psychologists also work extensively with families and, in particular, mothers of children with behavioural difficulties. This thesis has drawn from studies of all these aspects of psychology and demonstrated that mothers extend to their child the attributional privilege of bias usually apparent in explanations for the self. It also goes some way in supporting the view that this phenomenon is underpinned by a motivational mechanism. It thus contributes to the debate in social psychology concerning the underpinnings of the self-serving bias and lends support to Campbell & Sedikides' (1999) self-threat model. It also builds upon Aron & Aron's (1991;

1999) work examining the inclusion of others in the self and the ways in which one extends certain cognitive privileges to others who are considered part of the self. It contributes to developmental psychology and clinical psychology by identifying one aspect of the mother-child relationship that has previously been assumed but never experimentally demonstrated. That mothers may be misunderstanding or defensively explaining their child's difficulties in ways that may have clinical implications for the mother's behaviour, the child's behaviour and the satisfaction of their relationship. Further research must now establish the circumstances under which the theoretical and clinical significance of this finding is maximised.

Appendix 1 - General Health Questionnaire

QUESTIONNAIRE A

Please read this carefully:

We should like to know if you have had any medical complaints and how your health has been in general over the past few weeks. Please answer ***all*** the questions on the following pages simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

It is important that you try to answer ***all*** the questions.

Thank you.

Have you recently:

1.	been able to concentrate on whatever you are doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2.	lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3.	felt you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
4.	felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
5.	felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
6.	felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
7.	been able to enjoy your normal day to day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
8.	been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less than usual
9.	been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
10.	been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
11.	been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
12.	been feeling reasonably happy, all things considered?	More so than usual	About the same as usual	Less so than usual	Much less than usual

Appendix 2 - Strengths and Difficulties Questionnaire

QUESTIONNAIRE B

Is your child.....	Not True	Somewhat True	Certainly True
1 Considerate of other people's feelings	☐	☐	☐
2 Restless, overactive, cannot stay still for long	☐	☐	☐
3 Often complains of headaches, stomach-aches or sickness	☐	☐	☐
4 Shares readily with other children (treats, toys, pencils etc)	☐	☐	☐
5 Often has temper tantrums or hot temper	☐	☐	☐
6 Rather solitary, tends to play alone	☐	☐	☐
7 Generally obedient, usually does what adults request	☐	☐	☐
8 Many worries, often seems worried	☐	☐	☐
9 Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
10 Constantly fidgeting or squirming	☐	☐	☐
11 Has at least one good friend	☐	☐	☐
12 Often fights with other children or bullies them	☐	☐	☐
13 Often unhappy, down-hearted or tearful	☐	☐	☐
14 Generally liked by other children	☐	☐	☐
15 Easily distracted, concentration wanders	☐	☐	☐
16 Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
17 Kind to younger children	☐	☐	☐
18 Often lies or cheats	☐	☐	☐
19 Picked on or bullied by other children	☐	☐	☐
20 Often volunteers to help others (parents/teachers/other children)	☐	☐	☐
21 Thinks things out before acting	☐	☐	☐
22 Steals from home, school or elsewhere	☐	☐	☐
23 Gets on better with adults than with other children	☐	☐	☐
24 Many fears, easily scared	☐	☐	☐
25 Sees tasks through to the end, good attention span	☐	☐	☐

Appendix 3 - scenarios to form the basis of the vignettes in Study One

Characteristics of Oppositional Defiant Behaviour.

1. loses temper
2. argues with adults
3. actively defies or refuses to comply with adults' requests or rules
4. deliberately annoys people
5. blames others for his or her mistakes / behaviour
6. touchy or easily annoyed by others
7. angry and resentful
8. spiteful or vindictive

Scenario One (lego)*
(incorporates criteria 1, 2, 3, & 4)

X is playing at a friend Jim's house after school. He is continually annoying his Jim by hiding the pieces of lego Jim is about to use.

Jim becomes increasingly upset but still X doesn't stop. Jim's mum intervenes and asks X to stop hiding the lego. After a pause, she tells him more firmly to stop, at which point he says "you can't tell me what to do" and starts arguing with her.

Jim's mum thinks that X should go home, at which point he loses his temper and says he won't go.
It is not the first time this has happened.

Scenario Two (friends)
(incorporates criteria 5, 6, 7, & 8)

X is playing outside with some friends, where he can be seen from indoors. His is getting annoyed by his friends playing 'chase', although they are not doing anything to deliberately annoy or upset him.

Becoming angry and resentful towards the other children, he pushes one of their bikes over as he makes his way indoors. When X's mum asked what was wrong he obviously ignored her. In answer to her questioning about the bike being pushed over, he said it wasn't his fault and another child had made him do it (which was not true at all).

This has happened a few times recently.

Scenario Three (school)
(incorporates criteria 1, 3, 5 & 7)

Recently, John's mum collected him from school. When he came out, he seemed very angry and resentful / wound up. When asked what the matter was, he lost his temper and shouted at his mum to leave him alone.

John's mum finds out from a friend that his teacher had asked him to clear away some books he had got out and that he had refused to do so. He had also told the teacher he wasn't the one that got the books out. Consequently, the teacher had told him off.

John has had a number of these tantrums in the last 6 months.

Appendix 3 - scenarios to form the basis of the vignettes in Study One (continued)

Scenario Four (shop)*
(incorporates criteria 2, 4, 6 & 8)

X is food shopping with his mum. He is becoming increasingly annoyed with his mother for not allowing him to fill the trolley with sweets and cakes, and is arguing with her up and down every aisle.

Knowing his mother is getting annoyed with his behaviour, he continues to make a nuisance of himself, ignoring her requests to be quiet.

When she is not looking, he opens a jar of food and empties it over the other shopping and his mum's handbag before dropping it so it smashes on the floor. It is not the first time X has behaved like this.

Scenario Five (frogs)*
(more serious)

X has told his mum that he will be late home from school because he has been going swimming with a friend, Y, and Y's mum. When he is not back at 6pm, X's mum calls Y's mum who says that they had not been, nor had planned to go, swimming. She advised X's mum to call the school. The teacher said that X had not been in today after producing a note yesterday (allegedly from his mum) saying he would be absent to attend the dentist.

As X's mum put the phone down, X walked through the door, clearly trying to hide something under his coat. After a big tantrum and argument, X's mum eventually finds out that that X has been spending time finding ponds - in peoples' gardens and elsewhere - from which to get frogs for him and his friends to 'experiment' on.

Scenario Six (fire)*
(more serious)

Recently, X has been coming home with his clothes dirtier and shabbier than usual. His mum has also noticed scratches on his arms and legs. He refuses point blank to talk to her about why this is happening and she is curious about why it is happening. As such, she follows X and his friends as they go out to play.

They reach a derelict estate - they all know that they are not allowed to go in there - and start throwing stones at the windows of the houses. X's mum can't hear what is being said, but sees her son pushing another boy towards the door of one of the old houses, quite aggressively (it is obvious the other boy doesn't want to go).

Eventually, X pushes the other boy out of the way and starts to light a fire in the doorway of the building. Then they all run off.

Appendix 3 - scenarios to form the basis of the vignettes in Study One (continued)

Scenario Seven (clay)
(less serious)

X has joined an after school pottery club so he can make clay gifts as Christmas presents. However, today he returned with clay on his trousers because he forgot to wear the apron he's meant to use. He has also managed to spill half a milkshake down his front and so looks quite a state!

When getting home, his mum asks him to get changed and do his homework before dinner. After about half an hour, she goes up to his room to find him still sat in his dirty clothes, playing a computer game. He hasn't started his homework and said that he'd do it later, after dinner.

After dinner, X clears away the plates and says he's eaten too much and has a bit of a tummy-ache and wants to lie down. However, again, when his mum goes upstairs, she finds him playing his computer game.

Its not the first time this has happened!

Scenario Eight (drama)
(less serious)

X is in a drama lesson and won't join in with the rest of the group. He says he doesn't enjoy drama and would rather read. He also says he finds it boring.

Later on that day, X is seen by a teacher throwing his packed lunch into the bin. When asked, he says he isn't hungry and doesn't like what's been made for him.

When the teacher mentions this to his mum, she explains that he's always been a fussy eater and currently refuses to eat anything that isn't chocolate or crisps.

Appendix 4 - Family Profiles used in Study One

FAMILY ONE

John is a 9 year old boy who lives at home with his mum, dad, sister and brother. His mum is a bit depressed and fed up and has had a few ups and downs in the last few years. His dad works as consultant for a computer company - a job he has had for quite a long time.

FAMILY TWO

John is a 9 year old boy who lives at home with his mum, dad, sister and brother. His mum is quite depressed and fed up and had a few ups and downs in the last few years. His dad works as shop manager - a job he has had for only a short time after a few bouts of unemployment in the last few years .

FAMILY THREE

John is a 9 year old boy who lives at home with his mum (who's divorced), sister and brother. His mum is very depressed and fed up and has had quite a lot of ups and downs in the last few years . She also works some evenings and mornings cleaning the local school - a job she has had for a while, after being unemployed a couple of times in the last few years.

FAMILY FOUR

John is a 9 year old boy who lives at home with his mum, dad, sister and brother. His mum is generally happy and has had relatively few ups and downs in the last few years. His dad works as car mechanic - a job he has had for the last few years.

Appendix 5 - Own Child Attributions Questionnaire
(this is for a male, with the 'bike' scenario, but there were similar versions for a female, with the other three scenarios)

QUESTIONNAIRE C

This questionnaire is to do with what mothers believe might cause different behaviours that they see in their son. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see their son's behaviour and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine your son is playing outside with some friends, where he can be seen from indoors. His is getting annoyed by his friends playing 'chase', although they are not doing anything to deliberately annoy or upset him.

He gets a bit angry towards the other children and pushes one of their bikes over as he makes his way indoors. When you ask what was wrong he ignores you. When you ask him about the bike being pushed over, he said it wasn't his fault and another child had made him do it (which wasn't true).

1) Overall, how 'serious' or 'naughty' do you consider this kind of behaviour?

Not at all serious or naughty	1	2	3	4	5	Very serious or naughty

2) How frequently do you think that your son behaves in this way or a similar way?

More than once a day	Once a day or less	Once a week or less	Once per month or less	Never

3) If your son behaved in this way, what would be your immediate explanation for it?

.....
.....
.....
.....
.....

4) If your son behaved in this way or in similar ways, to what extent do you think that:

a) the behaviour would be caused by something specifically to do with your son, rather than something else?

Something about my son	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Appendix 5 - Own Child Attributions Questionnaire continued

4 - continued) If your son behaved in this way or in similar ways, to what extent do you think that:

b) your son would have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your son would or wouldn't have control?:.....

.....

c) the cause of his behaviour will be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this?.....

.....

d) this behaviour is caused by something unique to your son or by something common to most boys of that age?

Something unique about my son	1	2	3	4	5	Something common to most boys his age

What makes you think that?:.....

.....

5) Think about the possible cause of this behaviour (for instance, your answer to Question 3).
Would the cause influence your son in other situations (for example at school) or would it only influence this sort of situation
(i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in my son's life

Can you give any examples of other instances when your son may act in this way?:.....

.....

Appendix 5 - Own Child Attributions Questionnaire continued

6) How frequently do you think that a typical boy of your son's age behaves in this way or a similar way?

More than once a day	Once a day or less	Once a week or less	Once per month or less	Never

Thank you very much - please answer the questions on the information sheet next.

Appendix 6 - Other Child Attributions Questionnaire (this is for a male, with the 'bike' scenario, family profile 1, but there were similar versions for a female, with the other three scenarios and family profiles)

QUESTIONNAIRE D

This questionnaire is to do with what mothers believe might cause different behaviours that they might see in other people's children. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

John is a 9 year old boy who lives at home with his mum, dad, sister and brother. His mum is a bit depressed and fed up and has had a few ups and downs in the last few years. His dad works as consultant for a computer company - a job he has had for quite a long time.

Now imagine that John is playing outside with some friends, where he can be seen from indoors. His is getting annoyed by his friends playing 'chase', although they are not doing anything to deliberately annoy or upset him.

He gets a bit angry towards the other children and pushes one of their bikes over as he makes his way indoors. When his mum asks what was wrong he ignores her. When she asks him about the bike being pushed over, he said it wasn't his fault and another child had made him do it (which wasn't true).

1) Overall, how 'serious' or 'naughty' do you consider this kind of behaviour?

Not at all serious or naughty	1	2	3	4	5	Very serious or naughty

2) These questions are intended to try and find out why you think John may have behaved in the way that he did:

a) was the behaviour caused by something specifically to do with John or something else?

Something about John	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Appendix 6 - Other Child Attributions Questionnaire continued

b) does John have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that John would or wouldn't have control?: .....

.....

c) will the cause of John's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

d) is John's behaviour caused by something unique to John or by something common to most boys of that age?

Something unique about John	1	2	3	4	5	Something common to most boys his age

What makes you think that?:.....

.....

e) Would the cause influence John in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in John's life

Can you give any examples of other instances when John may act in this way?: .....

.....

Appendix 6 - Other Child Attributions Questionnaire continued

3) How frequently do you think that a typical boy of John's age behaves in this way or a similar way?

More than once a day	Once a day or less	Once a week or less	Once per month or less	Never

4) How frequently do you think that your child behaves in this way or a similar way?

More than once a day	Once a day or less	Once a week or less	Once per month or less	Never

3) If your child behaved in this way, what would be your immediate explanation for it?

.....
.....
.....
.....

That is the end of Questionnaire D. If you wouldn't mind, please answer the following questions and return the whole questionnaire to me in the envelope provided (which does not require a stamp).

1. Have you ever taken part in research of this kind before? YES / NO

2. Would you like to receive information about the results of this study? YES / NO

3. Would you be prepared to take part in future studies or projects I may be involved in? YES / NO

4. If "YES", may I have your home telephone number to contact you to take part in future research:

5. Do you practice a particular religion or faith? YES / NO (please say:)

The space below is for your comments or questions:

Many thanks for your time - I hope to complete the study by the autumn.

Appendix 7 - Information Sheet

INFORMATION SHEET

About you and the family

Please describe your marital status (e.g married / divorced, etc).....

You Name: Date of Birth:

Your partner or husband Name: Date of Birth:
(if applicable)

Your Children: Name Date of Birth School
(please list)

About work

Do you work outside of the home? NO / PART TIME / FULL TIME

Job title:.....

Does your husband / partner work outside of the home? NO / PART TIME / FULL TIME

Job title:.....

In the past five years, has the *main* earner been out of work for more than three months? YES / NO

If YES, when was this? 199..... For how long? .....months

Please think a little bit about the relationship you have with your son. On the following scale, please give an indication of how close you would say you are to each other:

Not close at all 1 2 3 4 5 6 7 8 Very close indeed

Appendix 8 - Preliminary Analyses for Study One

The possible influence of a number of unrelated variables upon general attributional formation was examined in order that potential confounds could be controlled for in the main analyses where necessary. These comprised: sex of child, scenario type, family profile and attachment. Each variable was entered as a between-subjects factor in a oneway ANOVA, with the five dimension scores (internality, controllability, stability, universality and globality) for own child or other child as dependent variables. Results of main effects are presented in Tables 25 to 31. Where *p* values reach statistical significance after Bonferonni correction is applied post-hoc analyses are summarised.

Table 23

Analysis of variance for sex of own child on dimension scores

		F				
Source	*df*	Internal	Controllable	Stable	Personal	Global
	between-subjects					
Sex	1	.08	.82	8.65**	.06	.08
S within-group error	123	(1.77)	(1.47)	(1.37)	(1.98)	(1.85)

Note. Values enclosed in parentheses represent mean square errors.

*$p<.05$, **$p<.01$, ***$p<.001$

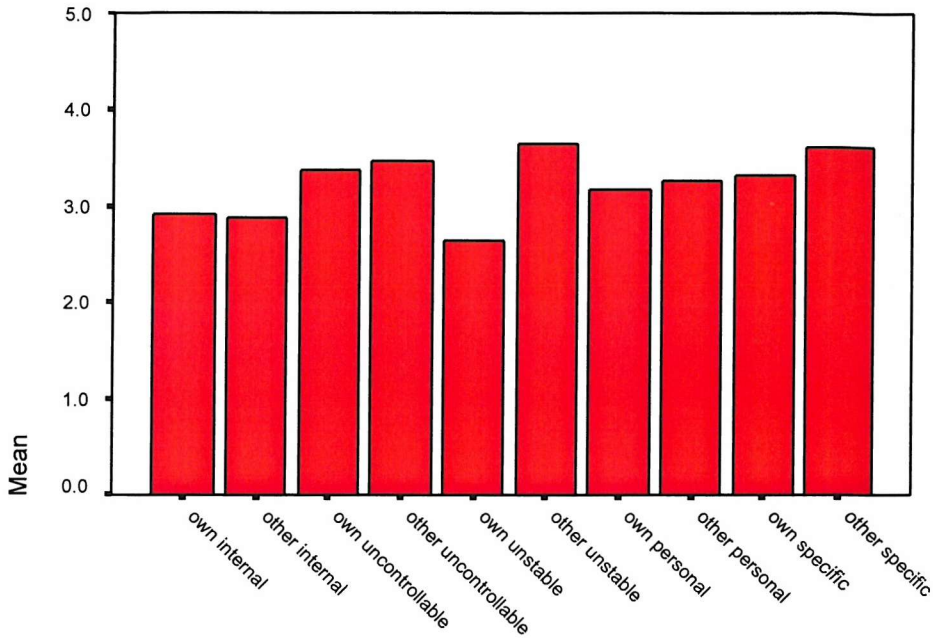


Figure 12. Mean attributional scores for mothers of boys.

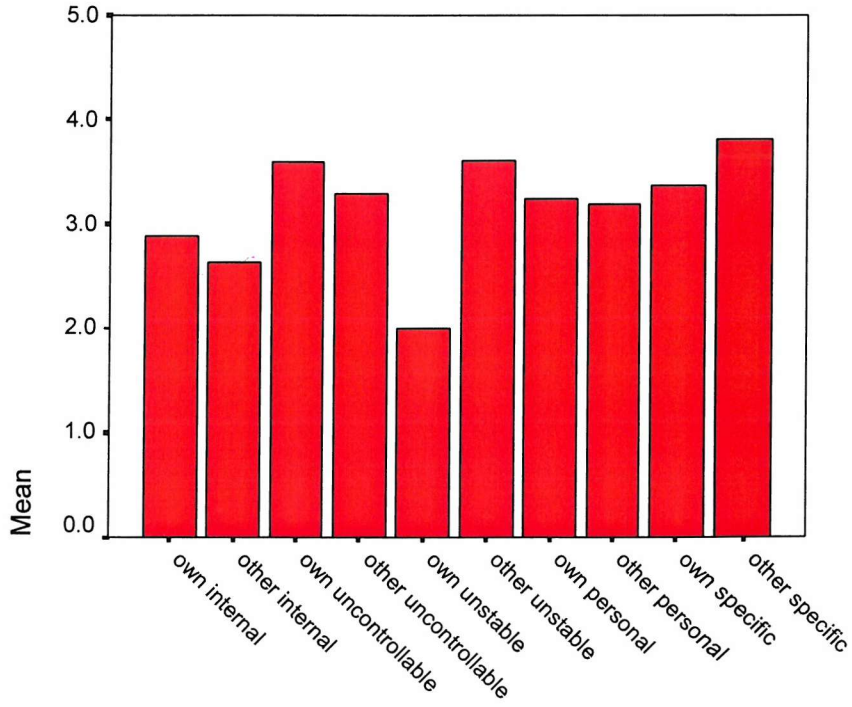


Figure 13. Mean attributional scores for mothers of girls.

When explaining own child's behaviour, mothers of boys are more likely to rate the cause as stable than are mothers of girls.

Table 24

Analysis of variance for sex of other child on dimension scores

		F				
Source	df	Internal	Controllable	Stable	Personal	Global
	between-subjects					
Sex	1	.08	.39	1.30	.00	.92
S within-group error	123	(1.71)	(1.14)	(.67)	(1.58)	(1.00)

Note. Values enclosed in parentheses represent mean square errors.
*p<.05, **p<.01, ***p<.001

There are no effects of child's gender on attributional ratings when mothers are explaining other children's behaviour.

Table 25

Analysis of variance for scenario type (own child) on dimension scores

		F				
Source	df	Internal	Controllable	Stable	Personal	Global
	between-subjects					
Scenario	3	.27	1.76	.41	4.52**	1.60
S within-group error	121	(1.79)	(1.44)	(1.48)	(1.80)	(1.81)

Note. Values enclosed in parentheses represent mean square errors.
*p<.05, **p<.01, ***p<.001

There is a main effect of scenario type on ratings of universality only. Causes of behaviour described in "bike" and

"book" are rated as more universal than those in "lego" or "shop".

Table 26

Analysis of variance for scenario type (other child) on dimension scores

Source	df	F				
		Internal	Controllable	Stable	Personal	Global
	between-subjects					
Scenario	1	2.41	3.22	1.96	4.36**	4.85**
S within-group error	121	(1.64)	(1.08)	(.65)	(1.45)	(.91)

Note. Values enclosed in parentheses represent mean square errors.
*p<.05, **p<.01, ***p<.001

Scenario type is more influential when mothers are explaining other children's behaviour. Again, there is a main effect of scenario type on ratings of universality such that causes of behaviour described in "lego" are rated as less universal than those offered in "bike" and "book". In addition, causes of behaviour described in "shop" are rated as more specific than those offered in relation to "book" and "lego".

Table 29

Analysis of variance for other child family profile on dimension scores

Source	df	F				
		Internal	Controllable	Stable	Personal	Global
	between-subjects					
Profile	3	4.80**	.94	3.85*	.69	.81
S within-group error	117	(1.56)	(1.13)	(.62)	(1.58)	(1.00)

Note. Values enclosed in parentheses represent mean square errors.
*p<.05, **p<.01, ***p<.001

Mothers receiving a vignette embedded in family profile four (happy) were more likely to perceive the causes of behaviour as internal to child than were mothers who were presented with profiles two (moderate stress) or three (severe stress). In addition, causes of behaviour embedded in profile three (severe stress) were rated as more stable than those in profile four (happy).

The influence of family profiles on ratings for own child was examined by constructing a profile for each case family based on those used in the OTHER-CAQ. Scores on the relevant family variables (marital status, mother's depression score, unemployment history, occupation of main earner in household, number of children in household) were individually examined for each case. Cases were then allocated to one of the profiles used in the OTHER-CAQ that most closely resembled their own demographic profile. A number of issues made it difficult to match families exactly to one preconstructed profile. Most notably, families would match on one variable (e.g., marital

status) but not on another (e.g., unemployment history). However, because cluster analysis does not offer scores that describe the absolute status of cases in each cluster (e.g., divorced or single) but rather a tendency for cases within that cluster to have an elevated or decreased score, as a group, on any given variable (e.g., more divorced people in cluster 1 vs. fewer divorced people in clusters 2 and 4), it was thought legitimate that a decision could be made as to which variables to prioritise in making a judgment on the allocation of cases to profiles. Given the potential theoretical importance of maternal depression upon attributions, it was decided that mother's GHQ score should be the primary indicator of family profile, followed by marital status, occupation of parents and then unemployment history. Upon this basis, 29 (23%) families were allocated to Profile 1; 24 (20%) families to Profile 2; 16 (13%) families to profile 3 and 53 (44%) to profile 4. The numbers in this allocation were similar to the distribution of families to the clusters in the cluster analysis for other profile, which were 19%, 6 %, 4% and 70 % respectively. In an attempt to determine the validity of this 'closest-approximation' allocation of sample families to pre-constructed family profiles, the same variables were entered in a K-means cluster analysis, with a forced four cluster solution. The results are presented in Table 28.

Table 28

Scores on cluster analysis of family variables

Variable[a]	Cluster 1	2	3	4
N	14	21	62	23
Marital status	.29	.33	.19	.22
Occupation	.86	.71	1.05	1.04
Unemployment	1.79	1.67	1.89	1.65
Mother's depression	9.50	5.86	.19	2.78
Number of children	2	3	2	3
Similar to Profile	3	2	4	1
Label	severe	moderate	happy	mild

Note N = number of subjects

[a] variables measured as follows:

Marital Status	0 = living alone, 1 = married / cohabiting
Occupation	1 = manual job, 2 = non-manual job
Unemployment	main earner unemployed in last five years?
Mother's depression	mother's score on GHQ-12 when child aged 10 years.
Number of children	number of children in the household

The results identify family profiles that resemble, to some extent, those identified in the cluster analysis for the OTHER-CAQ family profiles. Cluster one resembled Profile 3 (severe stress), Cluster two resembled profile 2 (moderate stress), cluster three, profile 4 (happy) and cluster four, profile 1 (mild stress). A percentage agreement score was calculated by identifying the number of cases that had been allocated to a cluster in the analysis which most closely resembled the profile to which they had been allocated a priori. 72% of cases were in 'matching' profiles; that is, had been allocated to a cluster in the analysis that most closely resembled the profile to which they had been allocated initially. A oneway ANOVA with one

between-group variable of family profile (mild, moderate, severe or happy) and five dependent variables (the scores on each attributional dimension for own child) was conducted. Results are presented in Table 29.

Table 29

Analysis of variance for own child family profile on dimension scores

		F				
Source	df	Internal	Controllable	Stable	Personal	Global
	between-subjects					
Profile	3	3.98**	3.39*	2.21	.65	.72
S within-group error	117	(1.68)	(1.36)	(1.33)	(1.96)	(1.86)

Note. Values enclosed in parentheses represent mean square errors.
*p<.05, **p<.01, ***p<.001

Post-hoc tests to examine the significant main effects indicated above revealed that mothers allocated to family profile four (happy) were more likely to rate their own child's negative behaviour as caused by something external to the child. Children whose family backgrounds are rated as belonging to profile four (happy) are also rated as more in control of their negative behaviours than children belonging to other families.

Effects of attachment on attributional rating

To determine whether attributional ratings are affected by the closeness of the mother-child relationship, a one-item rating of attachment (mothers were asked to rate on a scale of 1 to 8 how close they felt to their child) was correlated with each of the attributional ratings mothers made. Results showed that a higher

attachment score was associated with a higher score on the rating of internality (indicating more external cause; $r = .196$, $p<.02$) and a lower score on the rating of stability (indicating more unstable cause; $r = -207$, $p<.01$) for ratings of own child's negative behaviour. There were no significant correlations between rating of attachment and ratings of controllability, universality or globality for own child, nor on any of the dimensions for other child.

To control for those variables shown to exert an influence on attributional ratings, all main analyses showing significant effects were conducted a second time with each influential variable entered as a covariate. These are reported after the main analyses in the results section of Study One.

Appendix 8a - Rosenberg Self-Esteem Questionnaire

I would be really grateful if you could answer the following questions about yourself:

1. On the whole, I am satisfied with myself

strongly agree *agree* *disagree* *strongly disagree*

2. At times I think I am no good at all

strongly agree *agree* *disagree* *strongly disagree*

3. I feel that I have a number of good qualities

strongly agree *agree* *disagree* *strongly disagree*

4. I am able to do things as well as most other people

strongly agree *agree* *disagree* *strongly disagree*

5. I do not have much to be proud of

strongly agree *agree* *disagree* *strongly disagree*

6. I certainly feel useless at times

strongly agree *agree* *disagree* *strongly disagree*

7. I feel that I am a person of worth, at least as much as others

strongly agree *agree* *disagree* *strongly disagree*

8. I wish I could have more respect for myself

strongly agree *agree* *disagree* *strongly disagree*

9. All in all, I feel like I am a bit of a failure

strongly agree *agree* *disagree* *strongly disagree*

10. I take a positive attitude towards myself

strongly agree *agree* *disagree* *strongly disagree*

11. Most of the time, I am in good health

strongly agree *agree* *disagree* *strongly disagree*

12. At times I am concerned about being fat

strongly agree *agree* *disagree* *strongly disagree*

13. I generally get on well with my family

strongly agree *agree* *disagree* *strongly disagree*

14. I often seem to have problems at work

strongly agree *agree* *disagree* *strongly disagree*

15. I seem to worry and get nervous more than most people

strongly agree *agree* *disagree* *strongly disagree*

Thank you

Appendix 9 - Parental Sense of Competence Scale

This is a questionnaire about your attitudes and feelings that relate to parenting. Please circle the answer that most closely resembles how you feel.

	Strongly agree	agree	unsure	disagree	strongly disagree
The problems of taking care of a child are easy to solve once you know how your actions affect your child - an understanding I have acquired.	5	4	3	2	1
Even though being a parent can be rewarding, I am frustrated now while my child is at his/her present age.	5	4	3	2	1
I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.	5	4	3	2	1
Being a parent is manageable, and any problems are easily solved.	5	4	3	2	1
Being a parent makes me tense and anxious.	5	4	3	2	1
I would make a fine model for a new mother to follow in order to learn what she would need to know in order to be a good parent.	5	4	3	2	1
I go to bed the same way that I wake up in the morning: feeling like I have not achieved very much.	5	4	3	2	1
My mother was better prepared to be a good mother than I am.	5	4	3	2	1
A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.	5	4	3	2	1
I meet my own personal expectations for expertise in caring for my child.	5	4	3	2	1
If anyone can find the answer to what is troubling my child, I am the one.	5	4	3	2	1
Sometimes I feel like I'm not getting anything done.	5	4	3	2	1
Considering how long I've been a mother, I feel thoroughly familiar with this role.	5	4	3	2	1
My talents and interests are in other areas - not being a parent.	5	4	3	2	1
If being a mother of a child were only more interesting, I would be better motivated to do a better job as a parent.	5	4	3	2	1
I honestly believe I have all the skills necessary to be a good mother to my child.	5	4	3	2	1
Being a good mother is a reward in itself.	5	4	3	2	1

Thank you

Appendix 10 - Modified Own Child Attributions Questionnaire

I am going to describe to you some behaviour and I want you to try and imagine that it is your child that is behaving in this way. Then I will ask you some questions about it. OK?

> Imagine your son is playing outside with some friends, where he can be seen from indoors. He is getting annoyed by his friends playing 'chase', although they are not doing anything to deliberately annoy or upset him.
>
> He gets a bit angry towards the other children and pushes one of their bikes over as he makes his way indoors. When you ask what was wrong he ignores you. When you ask him about the bike being pushed over, he said it wasn't his fault and another child had made him do it.

These questions are about the little scenario you have just heard. Each one needs you to give me a number between 1 and 5 that describes how strongly you feel (give example).

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. So, please try and answer every question honestly or as best you can.

Do you think the behaviour that I described was.....

Not at all serious or naughty	1	2	3	4	5	Very serious or naughty

Does your child or has your child ever behaved like that or in a similar way?

No, never behaved like that	1	2	3	4	5	Very often behaves like that (every day)

Imagining your child did act like that:

Would the behaviour be caused by something specifically to do with your child or something else?

Something about your child	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think your child would have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your child would or wouldn't have control?:.....

.....

Appendix 10 - Modified Own Child Attributions Questionnaire continued

Would the cause of your child's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

Would this behaviour be caused by something unique to your child or by something common to most children of that age?

Something unique about your child	1	2	3	4	5	Something common to most children that age

What makes you think that?: .....

.....

Would the cause influence your child in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in child's life

Do you think the behaviour would be caused by something specifically to do with you or something else?

Something about you	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think you would have control over him behaving in this way?

Have no control at all over behaviour	1	2	3	4	5	Have complete control over behaviour

What makes you think that you would or wouldn't have control?: .....

.....

Appendix 11 - Transcript of fabricated interview (low context)

Low context

So, OK, I am just going to check a few details that we have here for you, and then ask you some questions like I explained earlier.

Could you just remind me again of your marital status?

Married.

And your child's date of birth?

19th March 1990.

And do you work outside of the home?

Yes.

And does your husband?

Yes.

OK. Could you tell me a little bit about yourself?

Yeah. I'm fine. (long pause).

OK - and a little bit about Andrew?

Well, he is your typical nine year old boy really.

You mentioned earlier something that happened last week - could you tell me a bit more about it?

What, when he was playing outdoors? Well, Andrew was playing outside with some friends, where I could see him, and he was getting a bit annoyed by his friends playing 'chase', you know, like they do. I couldn't really see that they were doing anything to deliberately annoy or upset him, but he got a bit angry towards the other children and pushed one of their bikes over. Then he makes his way indoors and I asked him what was wrong but he ignored me. The I asked him why he had pushed the bike over and he just said it wasn't him and one of the other kids had made him do it.

Appendix 12 - Transcript of fabricated interview (medium context)

Medium context

So, OK, I am just going to check a few details that we have here for you, and then ask you some questions like I explained earlier.

Could you just remind me again of your marital status?

Er - we got married in 1986.

And your child's date of birth?

26th February 1990. He's nine.

And do you work outside of the home?

Yeah - I have a little part-time job that I do.

And does your husband?

Yes - he works full time.

OK. Could you tell me a little bit about yourself?

Well, I am generally happy I think. You know, there are always the usual daily family niggles, but nothing really bad. Yeah - I'm OK.

OK - and a little bit about Peter?

Well, he's nine years old and is fairly normal - into all the normal type of boys things, you know. What do you want to know?.

Well, earlier you mentioned something that happened recently with him that I wonder if you could tell me a bit more about?

Oh that thing with his friends?.... Yeah - Peter was playing outside with some friends, where I could see him, and he was getting a bit annoyed by his friends playing 'chase', you know, like they do. I couldn't really see that they were doing anything to deliberately annoy or upset him, but he got a bit angry towards the other children and pushed one of their bikes over. Then he makes his way indoors and I asked him what was wrong but he ignored me. The I asked him why he had pushed the bike over and he just said it wasn't him and one of the other kids had made him do it.

Appendix 13 - Transcript of fabricated interview (rich context)

Enriched context

So, OK, I am just going to check a few details that we have here for you, and then ask you some questions like I explained earlier.

Could you just remind me again of your marital status?

I'm married. Me and my husband got married about 14 years ago and have been lucky really; we've always got on pretty well and there have never been any real major problems for us.

And your child's date of birth?

Joshua? Joshua has just had his ninth birthday - last week in fact! Yeah, they just seem to shoot up don't they?!

And do you work outside of the home?

Yes. I have a little job in town, three days a week. I get the school holidays off which is nice 'cause it means I can be at home with the children then, but it is nice to get out a bit as well and mix with other people you know.

And does your husband?

Yes. He has worked in the same place for ages - its a shop up in Fareham - and worked his way up the ranks, you know. He is a manager now, but pretty much knows all the different things involved in shop work and I think he likes it. He's never mentioned looking for anything else anyway and has been there for years, like I say, so...

OK. Could you tell me a little bit about yourself?

Well, I am quite happy really. You know, there are always things you can find to get unhappy about but generally I like to try and look on the bright side and see the positive in things. I don't really have that much to complain about, and I guess I am quite lucky where that's concerned, but yeah...I am happy really.

OK - and a little bit about Joshua?

Well, Joshua is Joshua. Quite, I dunno how I would describe Josh...like what sort of things do you mean?

Well, you said before that something happened last week where he was a bit...

-a bit, yeah. Well, what happened was he was playing outside with some friends, where I could see him, and he was getting a bit annoyed by his friends playing 'chase', you know, like they do. I couldn't really see that they were doing anything to deliberately annoy or upset him, but he got a bit angry towards the other children and pushed one of their bikes over. Then he makes his way indoors and I asked him what was wrong but he ignored me. The I asked him why he had pushed the bike over and he just said it wasn't him and one of the other kids had made him do it.

Appendix 14 - Information Sheet

INFORMATION SHEET

ID number:

Presentation number:

Appointment day & time:

Name:

Address:

Phone No:

Marital status :

Your Children:	Name	Date of Birth	School

Do you work outside of the home? NO / PART TIME / FULL TIME

Does your husband work outside of the home? NO / PART TIME / FULL TIME

Appendix 15 - Preamble and Instructions

PREAMBLE

As you know, I am from Southampton University, and I am looking at the way that mothers talk about their children. The age group that I have selected to talk about is 8 - 10 year olds, because that is the age group I am used to working with and the local schools around here are happy for me to send letters home via the classroom.

There are no tests or anything like that involved in what we are going to do today - there are no right or wrong answers. I am really just interested in what you think and feel about a number of different situations.

What is going to happen is something like this. I am going to play you three short snippets of interviews that I did with mothers last year. Well, actually, because there is a possibility that you might know their voice as their child might be in your child's class, I have re-recorded the interview using different people that you won't know, but the words have remained exactly the same. I just like to be very careful that no-one that ever takes part in my research is worried about anyone else ever hearing what they have said, because it is all confidential. So anything we talk about today is also completely just between us - I will identify you by a secret ID number only.

So, after each snippet of interview, I am going to ask you about 7 questions or so about what you have heard. These questions will be on a rating scale of 1 to 5 - like 1 is low and 5 is high...but I will go through each question with you as we get to them. At some point, I will also ask you to imagine your own child in a certain situation and then again to answer the same questions, and that will be either before, during or after the other snippets that you have heard.

What I should say is that although you will hear only little snippets of interviews, for some of the mothers I do actually have more information about them and their family so you can ask me questions if you want to know a bit more about them. I only have the information that they provided though, so if you do ask me any questions I will only be able to answer if they have actually said what you want to know. I think that will be clearer as we go through...

Finally, after we have done all that - which will only take about 10 minutes or so - I will get you to fill in a questionnaire about yourself and one about your child - they are only short and shouldn't take too long.

OK - so don't forget, if you want to ask anything as we go through, that is fine - or if you aren't clear about what a question means, just ask. Do you have any questions right now?

Appendix 16 - Modified Other Child Attributions Questionnaire

These questions are about the interview you have just heard. Think about the incident that the mother on the tape describes at the end, and I am going to ask you some questions about it. Each one needs you to give me a number between 1 and 5 that describes how strongly you feel (give example).

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. So, please try and answer every question honestly or as best you can.

Remember, you can ask me questions about the mother or the child or their family, but I can only give you information that I have available here, so if you are unsure, just try to give me your best guess.

Do you think the behaviour that the mother described was.....

Not at all serious or naughty	1	2	3	4	5	Very serious or naughty

Was the behaviour caused by something specifically to do with Andrew or something else?

Something about Andrew	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think Andrew has control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that Andrew would or wouldn't have control?: .....

.....

Will the cause of Andrew's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

Appendix 16 - Modified Other Child Attributions Questionnaire continued

Is Andrew's behaviour caused by something unique to Andrew or by something common to most boys of that age?

Something unique about Andrew	1	2	3	4	5	Something common to most boys his age

What makes you think that?:.....

.....

Would the cause influence Andrew in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in Andrew's life

Was the behaviour caused by something specifically to do with Andrew's mum or something else?

Something about Andrew's mum	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think Andrew's mum can control him behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that Andrew's mum would or wouldn't have control?: .....

.....

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Internality

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.06	.04	-.28
Step 2			
SDQ Total Score	-.05	.04	-.22
RSE Total Score	-.08	.06	-.251

Note. R^2 = .079 for Step 1 (p ns); R^2 = .138 for Step 2 (p ns)

N = 37

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Controllability

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.01	.04	-.00
Step 2			
SDQ Total Score	-.02	.04	-.01
RSE Total Score	-.00	.05	.02

Note. R^2 = .000 for Step 1 (p ns); R^2 = .000 for Step 2 (p ns)

N = 37

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Stability

Variable	B	SE B	β
Step 1			
SDQ Total Score	.06	.04	.25
Step 2			
SDQ Total Score	.06	.04	.24
RSE Total Score	.02	.06	.06

Note. R^2 = .065 for Step 1 (p ns); R^2 = .068 for Step 2 (p ns)

N = 37

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Universality

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.034	.035	-.163
Step 2			
SDQ Total Score	-.036	.037	-.171
RSE Total Score	.097	.053	.032

Note. R^2 = .027 for Step 1 (p ns); R^2 = .028 for Step 2 (p ns)

N = 37

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Globality

Variable	B	SE B	β
Step 1			
SDQ Total Score	.088	.037	.375
Step 2			
SDQ Total Score	.083	.039	.353*
RSE Total Score	.029	.055	.088

Note. R^2 = .141 for Step 1 (p ns); R^2 = .148 for Step 2 (p ns)

N = 37

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Internal-to-mother

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.100	.037	-.417**
Step 2			
SDQ Total Score	-.094	.038	-.393*
RSE Total Score	-.032	.055	-.096

Note. R^2 = 7.37 for Step 1 ($p<.01$); R^2 = .361 for Step 2 (p ns)

N = 37

*$p<.05$, ** $p<.01$

Appendix 17 - Regression Analyses with Child's Behavioural Status and Mother's Self-esteem as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Controllable-by-mother

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.139	.032	-.590***
Step 2			
SDQ Total Score	-.138	.034	-5.84***
RSE Total Score	-.089	.048	-.027

Note. R^2 = .348 for Step 1 (p<.001); R^2 = .035 for Step 2 (p ns)

N = 37

*p<.05, ** p<.01, *** p<.001

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Internality

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.06	.040	.280
Step 2			
SDQ Total Score	-.06	.043	-.271
EFF Total Score	-.01	.064	.033

Note. R^2 = .079 for Step 1 (p ns); R^2 = .80 for Step 2 (p ns)

N = 37

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Controllability

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.019	.036	-.005
Step 2			
SDQ Total Score	-.012	.038	-.059
EFF Total Score	-.05	.056	-.186

Note. R^2 = .000 for Step 1 (p ns); R^2 = .032 for Step 2 (p ns)

N = 37

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Stability

Variable	B	SE B	β
Step 1			
SDQ Total Score	.064	.041	.255
Step 2			
SDQ Total Score	.074	.043	.295
EFF Total Score	.051	.065	.137

Note. R^2 = .065 for Step 1 (p ns); R^2 = .082 for Step 2 (p ns)

N = 37

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Universality

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.034	.035	-.163
Step 2			
SDQ Total Score	-.046	.037	-.222
EFF Total Score	-.064	.055	-.204

Note. R^2 = .027 for Step 1 (p ns); R^2 = .065 for Step 2 (p ns)

N = 37

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Globality

Variable	B	SE B	β
Step 1			
SDQ Total Score	.088	.037	.375
Step 2			
SDQ Total Score	.090	.039	.383*
EFF Total Score	.096	.059	.027

Note. R^2 = .141 for Step 1 (p ns); R^2 = .141 for Step 2 (p ns)

N = 37

*p<.05

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Internal-to-mother

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.100	.037	-.417**
Step 2			
SDQ Total Score	-.082	.038	-.343*
EFF Total Score	.092	.056	.256

Note. R^2 = .174 for Step 1 (p<.01); R^2 = .234 for Step 2 (p ns)

N = 37

*p<.05, ** p<.01

Appendix 18 - Regression Analyses with Child's Behavioural Status and Mother's Sense of Parenting Efficacy (EFF) as Predictors (continued)

Summary of Hierarchical Regression Analysis for Variables Predicting Difference in Attributional Mean Difference Score on Dimension of Controllable-by-mother

Variable	B	SE B	β
Step 1			
SDQ Total Score	-.139	.032	-.590***
Step 2			
SDQ Total Score	-.135	.034	-.575***
EFF Total Score	.018	.051	.052

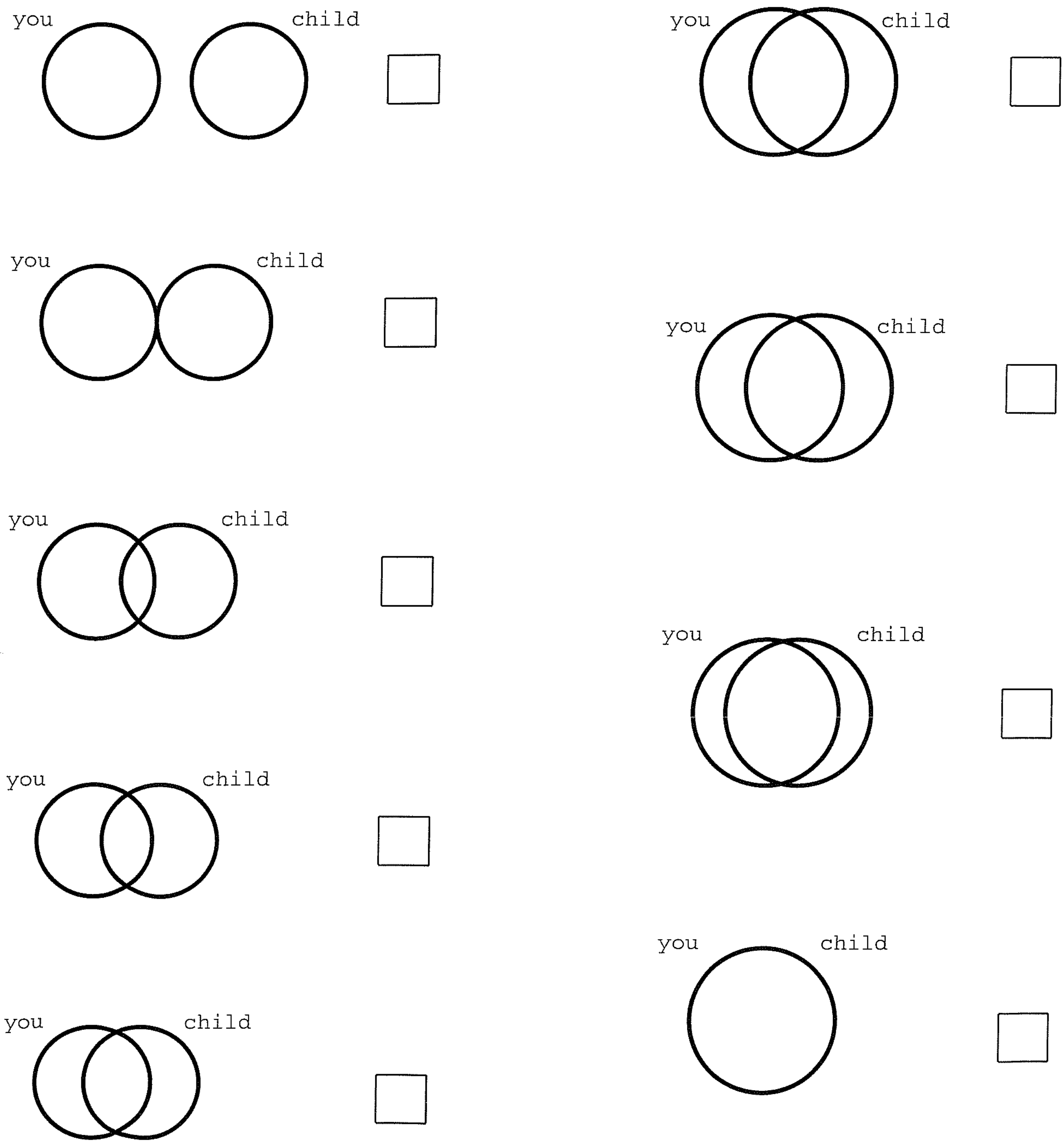
Note. R^2 = .348 for Step 1 (p<.001); R^2 = .035 for Step 2 (p ns)

N = 37

*p<.05, ** p<.01, *** p<.001

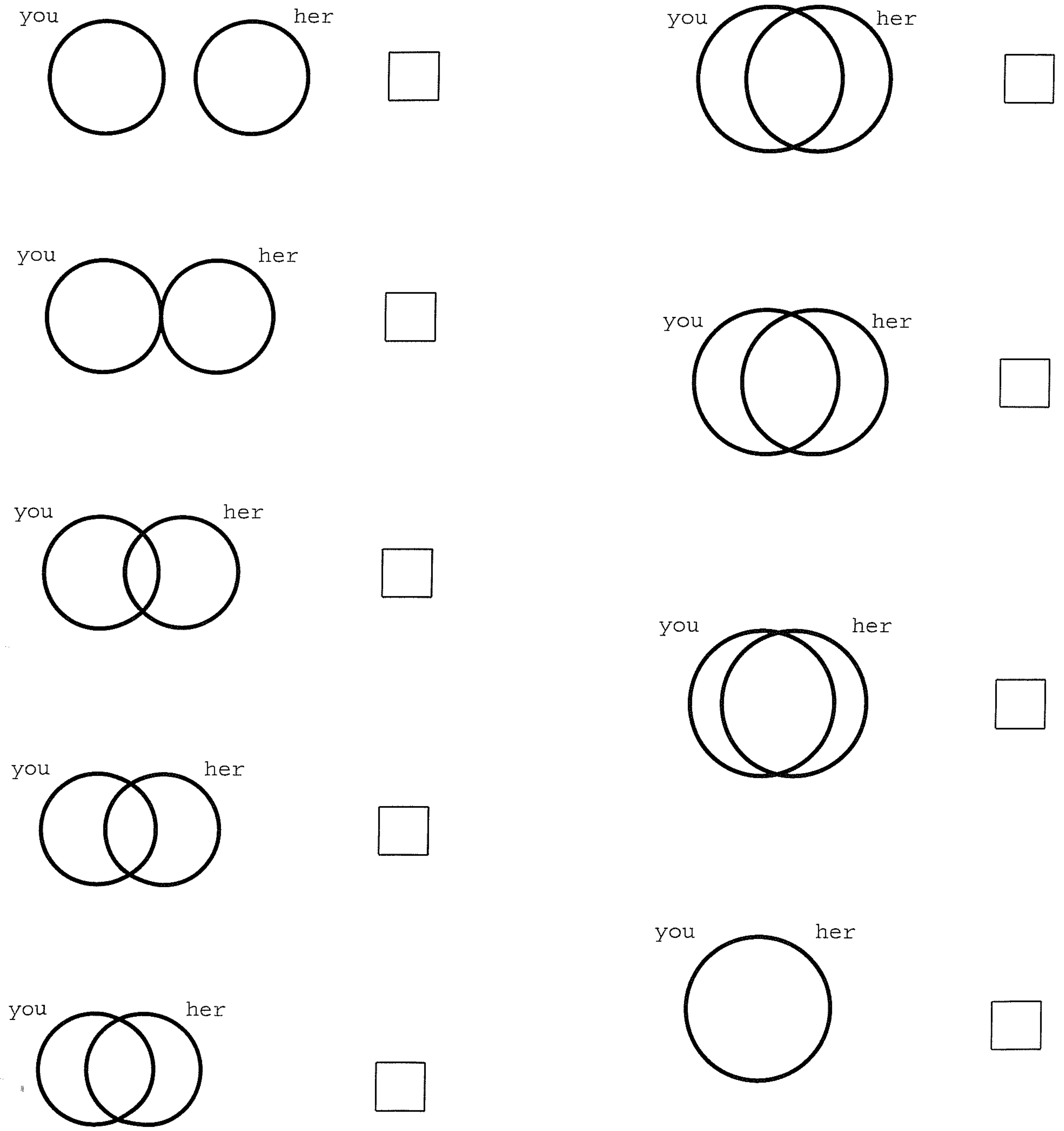
Appendix 19 - Child-as-Self Scale

This task is about the relationship you have with your child. Please tick the picture below which best describes the relationship you have with your child.



Appendix 20 - Friend-as-Self Scale

This task is about the relationship you have with ____________________. Please tick the picture below which best describes the relationship you have with her.



Appendix 21 - Future Judgment Task - Own Child

Below are a list of things that may or may not apply to your child when they are grown up. Please imagine your child thirty years from now, and rate how likely you think the following statements are. Try not to spend too long thinking about each item, but give your 'first reaction' to each statement. Below is an example question.

EXAMPLE QUESTION

"In thirty years' time, my child will have a child of their own" **VL** **L** **DK** **U** **VU**

if you think this is **very likely**, circle **'VL'**
if you think this is **likely**, circle **'L'**
if you **don't know**, circle **'DK'**
if you think this is **unlikely**, circle **'U'**
if you think this is **very unlikely**, circle **'VU'**

In thirty years' time, my child...

1. will have a good job	**VL**	**L**	**DK**	**U**	**VU**
2. will not know many people	**VL**	**L**	**DK**	**U**	**VU**
3. will win the lottery	**VL**	**L**	**DK**	**U**	**VU**
4. will be very attractive	**VL**	**L**	**DK**	**U**	**VU**
5. will be burgled	**VL**	**L**	**DK**	**U**	**VU**
6. will be unemployed	**VL**	**L**	**DK**	**U**	**VU**
7. will be happy in life	**VL**	**L**	**DK**	**U**	**VU**
8. will need an operation	**VL**	**L**	**DK**	**U**	**VU**
9. will have no money	**VL**	**L**	**DK**	**U**	**VU**
10. will have lots of friends	**VL**	**L**	**DK**	**U**	**VU**
11. will get cancer	**VL**	**L**	**DK**	**U**	**VU**
12. will have lots of luck	**VL**	**L**	**DK**	**U**	**VU**
13. will be divorced	**VL**	**L**	**DK**	**U**	**VU**
14. will have been in prison	**VL**	**L**	**DK**	**U**	**VU**

Appendix 21 - Future Judgment Task - Own Child (continued)

15. will have what they want	**VL**	**L**	**DK**	**U**	**VU**
16. will have known someone who died	**VL**	**L**	**DK**	**U**	**VU**
17. will have good health	**VL**	**L**	**DK**	**U**	**VU**
18. will have had a car stolen	**VL**	**L**	**DK**	**U**	**VU**
19. will be happily married	**VL**	**L**	**DK**	**U**	**VU**
20. will have good qualifications	**VL**	**L**	**DK**	**U**	**VU**

Appendix 22 - Future Judgment Task - Other Child

Below are a list of things that may or may not apply to _____ when they are grown up. Please imagine _____ thirty years from now, and rate how likely you think the following statements are. Try not to spend too long thinking about each item, but give your 'first reaction' to each statement. Below is an example question.

EXAMPLE QUESTION

"In thirty years' time, _____ will have a child of their own" **VL L DK U VU**

if you think this is **very likely**, circle **'VL'**
if you think this is **likely**, circle **'L'**
if you **don't know**, circle **'DK'**
if you think this is **unlikely**, circle **'U'**
if you think this is **very unlikely**, circle **'VU'**

In thirty years' time, _____...

1. will have a good job	**VL**	**L**	**DK**	**U**	**VU**
2. will not know many people	**VL**	**L**	**DK**	**U**	**VU**
3. will win the lottery	**VL**	**L**	**DK**	**U**	**VU**
4. will be very attractive	**VL**	**L**	**DK**	**U**	**VU**
5. will be burgled	**VL**	**L**	**DK**	**U**	**VU**
6. will be unemployed	**VL**	**L**	**DK**	**U**	**VU**
7. will be happy in life	**VL**	**L**	**DK**	**U**	**VU**
8. will need an operation	**VL**	**L**	**DK**	**U**	**VU**
9. will have no money	**VL**	**L**	**DK**	**U**	**VU**
10. will have lots of friends	**VL**	**L**	**DK**	**U**	**VU**
11. will get cancer	**VL**	**L**	**DK**	**U**	**VU**
12. will have lots of luck	**VL**	**L**	**DK**	**U**	**VU**
13. will be divorced	**VL**	**L**	**DK**	**U**	**VU**
14. will have been in prison	**VL**	**L**	**DK**	**U**	**VU**
15. will have what they want	**VL**	**L**	**DK**	**U**	**VU**

Appendix 22 - Future Judgment Task - Other Child (continued)

16. will have known someone who died	**VL**	**L**	**DK**	**U**	**VU**
17. will have good health	**VL**	**L**	**DK**	**U**	**VU**
18. will have had a car stolen	**VL**	**L**	**DK**	**U**	**VU**
19. will be happily married	**VL**	**L**	**DK**	**U**	**VU**
20. will have good qualifications	**VL**	**L**	**DK**	**U**	**VU**

Appendix 23 - Attributions Questionnaire: Shop/Private/Own Child

This questionnaire is to do with what mothers believe might cause different behaviours that they see in their sons. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see their son's behaviour and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine you pop to the local little corner shop with your son to pick up some milk. It is late morning and the shop is empty. Your son starts asking for sweets and chocolate but you say no so he starts arguing with you. Knowing that you are getting a bit fed up with him, he carries on, ignoring your requests to be quiet.

If your son behaved in this way, what would be your immediate explanation for the behaviour?

.....

If your son behaved in this way or in similar ways, to what extent do you think that the behaviour would be caused by something specifically to do with your son, rather than something else?

Something about my son — 1 — 2 — 3 — 4 — 5 — Something else

What sort of things are you thinking of in your answer? : .....

.....

If your son behaved in this way or in similar ways, to what extent do you think that your son would have control over behaving in this way?

Has no control at all over his behaviour — 1 — 2 — 3 — 4 — 5 — Has complete control over his behaviour

What makes you think that your son would or wouldn't have control?: .....

.....

If your child behaved like this, would you feel embarrassed / upset by it?

Not at all embarrassed or upset — 1 — 2 — 3 — 4 — 5 — Extremely embarrassed or upset

Why?.....

Appendix 23 - Attributions Questionnaire: Shop/Private/Own Child (continued)

If your son behaved in this way or in similar ways, to what extent do you think that the cause of his behaviour will be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

If your son behaved in this way or in similar ways, to what extent do you think that his behaviour is caused by something unique to your son or by something common to most boys of that age?

Something unique about my son	1	2	3	4	5	Something common to most boys his age

What makes you think that?:.....

.....

Think about the possible cause of this behaviour. Would the cause influence your son in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with a friend)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in my son's life

Can you give any examples of other instances when your son may act in this way?:.....

.....

Do you think the behaviour would be caused by something specifically to do with <u>you</u> or something else?

Something about you	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Appendix 23 - Attributions Questionnaire: Shop/Private/Own Child (continued)

Do you think you would have control over him behaving in this way?

Have no control at all over behaviour	1	2	3	4	5	Have complete control over behaviour

What makes you think that you would or wouldn't have control?:.....

.....

Appendix 24 - Attributions Questionnaire: Shop/Public/Own Child

This questionnaire is to do with what mothers believe might cause different behaviours that they see in their daughter. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see their daughter's behaviour and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine you go shopping with your daughter for the weekly groceries. It is Friday evening and the supermarket is busy. Your daughter starts asking for sweets and chocolate but you say no so she starts arguing with you. Knowing that you are getting a bit fed up with her, she carries on, ignoring your requests to be quiet. Lots of people are looking at you.

If your daughter behaved in this way, what would be your immediate explanation for the behaviour?

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that the behaviour would be caused by something specifically to do with your daughter, rather than something else?

Something about my daughter — 1 — 2 — 3 — 4 — 5 — Something else

What sort of things are you thinking of in your answer? : .....

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that your daughter would have control over behaving in this way?

Has no control at all over her behaviour — 1 — 2 — 3 — 4 — 5 — Has complete control over her behaviour

What makes you think that your daughter would or wouldn't have control?:.....

.....

Appendix 24 - Attributions Questionnaire: Shop/Public/Own Child (continued)

If your child behaved like this, would you feel embarrassed / upset by it?

Not at all embarrassed or upset	1	2	3	4	5	Extremely embarrassed or upset

Why?.....

If your daughter behaved in this way or in similar ways, to what extent do you think that the cause of her behaviour will be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that this behaviour is caused by something unique to your daughter or by something common to most girls of that age?

Something unique about my daughter	1	2	3	4	5	Something common to most girls her age

What makes you think that?:.....

.....

Think about the possible cause of this behaviour. Would the cause influence your daughter in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with a friend)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in my daughter's life

Can you give any examples of other instances when your daughter may act in this way?: .....

.....

Appendix 24 - Attributions Questionnaire: Shop/Public/Own Child (continued)

Do you think the behaviour would be caused by something specifically to do with <u>you</u> or something else?

Something about you	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think you would have control over him behaving in this way?

Have no control at all over behaviour	1	2	3	4	5	Have complete control over behaviour

What makes you think that you would or wouldn't have control?: .....

.....

Appendix 25 - Attributions Questionnaire: Lego/Private/Own Child

This questionnaire is to do with what mothers believe might cause different behaviours that they see in their daughter. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see their daughter's behaviour and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine your daughter is playing with a friend at your house after school whilst the friend's mother is at work. You are watching them both play and your daughter is annoying her friend by hiding the toys her friend is about to use .

Her friend becomes upset but your daughter carries on. You ask your daughter to stop hiding the toys, but she doesn't. After a pause, you tell her again, at which point she says "you can't tell me what to do" and starts arguing with you.

If your daughter behaved in this way, what would be your immediate explanation for the behaviour?

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that the behaviour would be caused by something specifically to do with your daughter, rather than something else?

Something about my daughter	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that your daughter would have control over behaving in this way?

Has no control at all over her behaviour	1	2	3	4	5	Has complete control over her behaviour

What makes you think that your daughter would or wouldn't have control?:.....

.....

Appendix 25 - Attributions Questionnaire: Lego/Private/Own Child (continued)

If your child behaved like this, would you feel embarrassed / upset by it?

Not at all embarrassed or upset — 1 2 3 4 5 — Extremely embarrassed or upset

Why?.....

If your daughter behaved in this way or in similar ways, to what extent do you think that the cause of her behaviour will be present again in the future or was it a 'one-off'?

Will never be present again — 1 2 3 4 5 — Will always be present

What makes you think this? .....

.....

If your daughter behaved in this way or in similar ways, to what extent do you think that this behaviour is caused by something unique to your daughter or by something common to most girls of that age?

Something unique about my daughter — 1 2 3 4 5 — Something common to most girls her age

What makes you think that?:.....

.....

Think about the possible cause of this behaviour. Would the cause influence your daughter in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with a friend)?

Only influences this sort of situation — 1 2 3 4 5 — Influences all situations in my daughter's life

Can you give any examples of other instances when your daughter may act in this way?: .....

.....

Appendix 25 - Attributions Questionnaire: Lego/Private/Own Child (continued)

Do you think the behaviour would be caused by something specifically to do with you or something else?

Something about you	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think you would have control over her behaving in this way?

Have no control at all over behaviour	1	2	3	4	5	Have complete control over behaviour

What makes you think that you would or wouldn't have control?: .....

.....

Appendix 26 - Attributions Questionnaire: Lego/Public/Own Child

This questionnaire is to do with what mothers believe might cause different behaviours that they see in their son. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see their son's behaviour and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine your son is playing with friends at another house after school. You and the other mothers are chatting and watching them play. Your son is annoying his friends by hiding the toys they are about to use.

His friends become upset but your son carries on. You ask your son to stop hiding the toys, but he doesn't. After a pause, you tell him again, at which point he says "you can't tell me what to do" and starts arguing with you in front of everyone.

If your son behaved in this way, what would be your immediate explanation for the behaviour?

.....

If your son behaved in this way or in similar ways, to what extent do you think that the behaviour would be caused by something specifically to do with your son, rather than something else?

Something about my son	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

If your son behaved in this way or in similar ways, to what extent do you think that your son would have control over behaving in this way?

Has no control at all over her behaviour	1	2	3	4	5	Has complete control over her behaviour

What makes you think that your son would or wouldn't have control?: .....

.....

Appendix 26 - Attributions Questionnaire: Lego/Public/Own Child (continued)

If your child behaved like this, would you feel embarrassed / upset by it?

Not at all embarrassed or upset	1	2	3	4	5	Extremely embarrassed or upset

Why?.....

If your son behaved in this way or in similar ways, to what extent do you think that the cause of his behaviour will be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

If your son behaved in this way or in similar ways, to what extent do you think that this behaviour is caused by something unique to your son or by something common to most boys of that age?

Something unique about my son	1	2	3	4	5	Something common to most boys his age

What makes you think that?:.....

.....

Think about the possible cause of this behaviour. Would the cause influence your son in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with a friend)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in my son's life

Can you give any examples of other instances when your son may act in this way?:.....

.....

Appendix 26 - Attributions Questionnaire: Lego/Public/Own Child (continued)

Do you think the behaviour would be caused by something specifically to do with <u>you</u> or something else?

Something about you	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think you would have control over him behaving in this way?

Have no control at all over behaviour	1	2	3	4	5	Have complete control over behaviour

What makes you think that you would or wouldn't have control?: .....

.....

Appendix 27 - Attributions Questionnaire: Shop/Private/Other Child

This questionnaire is to do with what you believe might cause different behaviours that you might see in your friend's child: _____. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine your friend pops to the local little corner shop with her son (named above) to pick up some milk. It is late morning and the shop is empty. Her son starts asking for sweets and chocolate but the mum says no so the son starts arguing with her. Knowing that the mum is getting a bit fed up with him, the son carries on, ignoring your friend's requests to be quiet.

If your friend's child behaved in this way, what would be your immediate explanation for the behaviour?

.....
.....
.....

Was the behaviour caused by something specifically to do with your friend's child or something else?

Something about friend'schild	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Does your friend's child have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend's child would or wouldn't have control?:.....

.....

Appendix 27 - Attributions Questionnaire: Shop/Private/Other Child (continued)

Will the cause of your friend's child's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

Is the behaviour caused by something unique to your friend's child or by something common to most children of that age?

Something unique about child	1	2	3	4	5	Something common to most children this age

What makes you think that?: .....

.....

Would the cause influence your friend's child in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in child's life

Can you give any examples of other instances when your friend's child may act in this way?: .....

.....

Appendix 27 - Attributions Questionnaire: Shop/Private/Other Child (continued)

Was the behaviour caused by something specifically to do with your friend (i.e., the child's mother) or something else?

Something about child's mother	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think your friend (the child's mother) mum can control the child behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend would or wouldn't have control?: .....

.....

Appendix 28 - Attributions Questionnaire: Shop/Public/Other Child

This questionnaire is to do with what you believe might cause different behaviours that you might see in your friend's child: _____. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine you go shopping with your daughter for the weekly groceries. It is Friday evening and the supermarket is busy. Your daughter starts asking for sweets and chocolate but you say no so she starts arguing with you. Knowing that you are getting a bit fed up with her, she carries on, ignoring your requests to be quiet. Lots of people are looking at you.

If your friend's child behaved in this way, what would be your immediate explanation for the behaviour?

.....
.....
.....

Was the behaviour caused by something specifically to do with your friend's child or something else?

Something about friend'schild	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Does your friend's child have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend's child would or wouldn't have control?: .....

.....

Appendix 28 - Attributions Questionnaire: Shop/Public/Other Child (continued)

Will the cause of your friend's child's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

Is the behaviour caused by something unique to your friend's child or by something common to most children of that age?

Something unique about child	1	2	3	4	5	Something common to most children this age

What makes you think that?:.....

.....

Would the cause influence your friend's child in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in child's life

Can you give any examples of other instances when your friend's child may act in this way?:.....

.....

Appendix 28 - Attributions Questionnaire: Shop/Public/Other Child (continued)

Was the behaviour caused by something specifically to do with your friend (i.e., the child's mother) or something else?

Something about child's mother	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think your friend (the child's mother) mum can control the child behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend would or wouldn't have control?: .....

.....

Appendix 29 - Attributions Questionnaire: Lego/Private/Other Child

This questionnaire is to do with what you believe might cause different behaviours that you might see in your friend's child: _____. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine the child named above (i.e., your friend's child) is playing with "Joe" at home after school whilst Joe's mother is at work. Your friend is watching them both play and her child is annoying Joe by hiding the toys Joe is about to use . Joe becomes upset but your friend's child carries on. Your friend asks her child to stop hiding the toys, but she doesn't. After a pause, she tells her again, at which point she says "you can't tell me what to do" and starts arguing with her.

If your friend's child behaved in this way, what would be your immediate explanation for the behaviour?

.....
.....
.....

Was the behaviour caused by something specifically to do with your friend's child or something else?

Something about friend'schild	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Does your friend's child have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend's child would or wouldn't have control?: .....

.....

Appendix 29 - Attributions Questionnaire: Lego/Private/Other Child (continued)

Will the cause of your friend's child's behaviour be present again in the future or was it a 'one-off'?

Will never be present again	1	2	3	4	5	Will always be present

What makes you think this? .....

.....

Is the behaviour caused by something unique to your friend's child or by something common to most children of that age?

Something unique about child	1	2	3	4	5	Something common to most children this age

What makes you think that?:.....

.....

Would the cause influence your friend's child in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation	1	2	3	4	5	Influences all situations in child's life

Can you give any examples of other instances when your friend's child may act in this way?:.....

.....

Appendix 29 - Attributions Questionnaire: Lego/Private/Other Child (continued)

Was the behaviour caused by something specifically to do with your friend (i.e., the child's mother) or something else?

Something about child's mother	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think your friend (the child's mother) mum can control the child behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend would or wouldn't have control?: .....

.....

Appendix 30 - Attributions Questionnaire: Lego/Public/Other Child

This questionnaire is to do with what you believe might cause different behaviours that you might see in your friend's child: _____. Please read the information in the box below and then answer the questions that follow, by circling the statement or number you feel closest to.

There are no right or wrong answers - I simply want to try and understand how mothers might see different behaviours and the reasons they might give for it. Please try and answer every question honestly, and where you would like to add further comments or give examples of what you mean, please do so in the space provided.

Imagine the child named above is playing with friends at another house after school. His mother and the other mothers are chatting and watching the children play. Your friend's son is annoying his friends by hiding the toys they are about to use.

His friends become upset but the son carries on. His mother (your friend) asks her son to stop hiding the toys, but he doesn't. After a pause, she tells him again, at which point the son says "you can't tell me what to do" and starts arguing with the mother in front of everyone.

If your friend's child behaved in this way, what would be your immediate explanation for the behaviour?

.....
.....
.....

Was the behaviour caused by something specifically to do with your friend's child or something else?

Something about friend's child	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

Does your friend's child have control over behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend's child would or wouldn't have control?: .....

.....

Appendix 30 - Attributions Questionnaire: Lego/Public/Other Child

Will the cause of your friend's child's behaviour be present again in the future or was it a 'one-off'?

Will never be present again 1 2 3 4 5 Will always be present

What makes you think this? .....

.....

Is the behaviour caused by something unique to your friend's child or by something common to most children of that age?

Something unique about child 1 2 3 4 5 Something common to most children this age

What makes you think that?:.....

.....

Would the cause influence your friend's child in other situations (for example at school) or would it only influence this sort of situation (i.e., playing with friends)?

Only influences this sort of situation 1 2 3 4 5 Influences all situations in child's life

Can you give any examples of other instances when your friend's child may act in this way?:.....

.....

Appendix 30 - Attributions Questionnaire: Lego/Public/Other Child

Was the behaviour caused by something specifically to do with your friend (i.e., the child's mother) or something else?

Something about child's mother	1	2	3	4	5	Something else

What sort of things are you thinking of in your answer? : .....

.....

Do you think your friend (the child's mother) mum can control the child behaving in this way?

Has no control at all over behaviour	1	2	3	4	5	Has complete control over behaviour

What makes you think that your friend would or wouldn't have control?: .....

.....

Appendix 31 - Information Sheet

FINAL INFORMATION SHEET

Please answer the following general questions about yourself and your family and return everything in the FREEPOST envelope enclosed. Thanks ☺

Your marital status : .....

Names & details of your children:

Name	Date of Birth	School

Do you work outside of the home? NO / PART TIME / FULL TIME

Does your husband/partner work outside of the home?
NO / PART TIME / FULL TIME

Would you like to take part in further studies in the future? YES / NO

Would you like further information about any of the questions asked in this study? If so, please specify below.

.....
.....
.....

Finally, I would just like to say thank you once again for taking part in this research. I really appreciate your time and comments.

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