Inter-parental conflict, domestic violence and children's

psychological adjustment: The role of children's perceptions of

parental behaviour.

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PhD 2008

UMI Number: U584303

UMI

Dissertation Publishing

ProQuest

Acknowledgements

I have been guided and supported by many people throughout the duration of my studies. First and foremost, I would like to extend my heartfelt thanks to my supervisor, Professor Gordon Harold. His exciting work inspired my interest in the area as an undergraduate, and his mentorship has been a source of challenge, strength, and guidance over the last ten years. He has shaped where I have been, and also where I will go - both as a scholar, and as a person. I also wish to express my gratitude to Dr. Katherine Shelton, who has been a constant source of example, advice, and encouragement in every year that I have known her. Jessica Aitken, Andrew Nelson and Kerry Rees, also shared every aspect of this experience with me, and were significant in helping me to keep going on a daily basis.

Preceding, and also running alongside my academic pursuits, I have been fortunate to have been involved in several projects that have been incredibly interesting in their own right, but which have also served to enrich and round my studies. I extend my thanks to Sandra Goosey, Sandra Holliday, Mark Rivett and Diana Barran. Each person has influenced the direction I have taken. Their dedication to, and passion for their respective fields of work is, or has been an inspiration. I am particularly grateful to Diana Barran, and Juliet Dearden who have shown tremendous interest and care throughout the writing up of this PhD.

I would like to express my deepest gratitude to my Mum and Dad, Ginny and Ben Howarth. They have supported me and cheered me on in everything that I have set out to achieve. During the last two years they have shown endless love, patience and belief, and I consider the completion of this PhD to be a team effort between them and I. Most importantly they have provided me with the sense that whatever happens I can always come 'home', and I am eternally grateful for the safe base that they

provide. I would also like to thank my sister, Charlotte Early. She is my closest ally in life and has never failed to provide a shoulder, an ear, and advice that has, and always will be, invaluable. I also thank her husband, Matthew Early, for his friendship and perspective. Finally, a huge thank-you is extended to my closest friends: Georgina Butt, Jodie Abraham, Deborah Stoker, Amanda Sullivan, Caroline Vardy; Sarah Cowman, Leanne Davies, Jessica Davies and Emma Luther. Their loyal and unfaltering friendship has helped me to weather all kinds of storms. They have not only made the long time spent pursuing this goal, laughter filled; they, along with my family have made realising it possible.

I dedicate this thesis to all four of my grandparents, but in particular, my Grandmother, Violet Harding, and Grandfather, John Howarth. I was inspired by my Nana's belief in education and learning, and spurred on by the knowledge that she didn't have available to her, the opportunities that I was lucky enough to be offered. She would have been so thrilled to see how far I have come. My Grandad has supported me tirelessly in every respect throughout my life and my studies, and I hope that I have paid him back a little, by making him proud of me.

Contents

Summary

The research presented in this thesis applies a process-orientated perspective to understanding children's emotional and behavioural adjustment in the context of hostile and violent inter-parental conflict. The studies presented examined the relationship between inter-parental conflict and the quality of parent-child relations, and the role that dysfunction in these family relationships may play in determining children's psychological adaptation. In particular, the primary focus of this research was concerned with children's perceptions, or social cognitive processing, of these family relationships as a primary mechanism through which exposure to inter-parental conflict ranging in severity, influences children's psychological wellbeing.

Using data from three separate samples of children and parents drawn from community and clinical settings in the United Kingdom, a set of four interlocking studies was conducted. First, using a sample of over 200 children and parents, the quality of parent-child relations was found to play a mediating role in the relationship between parents' reports of marital conflict and children's immediate and longer term externalising behaviour. Recognising the need to examine the interrelationships between the marital and parent-child relationship from the child's perspective, the second study considered the joint role played by children's appraisals of both inter-parental conflict and parent-child relationship quality in explaining children's adaptation in the context of varying levels of conflict. Children's appraisals of both relationships were found to be important in conveying effects to children's psychological adaptation across the spectrum of inter-parental behaviour, although there was some variation in processes underpinning children's development as a function of conflict severity and the index of adjustment considered (internalising

symptoms, externalising problems). Next, the role of younger children's appraisals of family relationships was examined. Children's appraisals were found to play an intervening role in the relationship between hostile inter-parental conflict and adjustment, although children's internalising symptoms were found to be affected directly through children's appraisals of threat relating to parents' marital conflict, whereas children's externalising problems were found to be affected indirectly, through children's respective appraisals of both the inter-parental and parent-child relationships. Finally, children's appraisals of multiple family relationships were examined as a mechanism through which very hostile forms of inter-parental conflict influenced children's concurrent adjustment. Broad agreement was found with the previous studies, where children's appraisals of the inter-parental relationship seemed to be particularly important in accounting for children's internalising symptoms in the context of high inter-parental conflict, whereas children's views on the quality of relations with parents were more important in accounting for children's externalising problems.

Collectively, these studies represent a process-orientated account of how inter-parental conflict across the spectrum of severity affects children's adjustment, and in particular locates children's understanding of family relationships as a primary mechanism through which hostile and violent inter-parental conflict impacts on children's psychological functioning. These findings are of relevance to researchers, practitioners and policy makers seeking to understand how interparental conflict and domestic violence affects children.

Chapter 1

The impact of domestic violence on children constitutes a problem of significant social concern, with research documenting short- and long-term effects on children's psychological functioning and development (English, Marshall & Stewart, 2003). Yet, whilst exposure to domestic violence undoubtedly represents a significant stressor for children, there is considerable variation in children's reactions and adaptation following exposure to this risky family context (Grych, Jouriles, Swank, McDonald & Norwood, 2000; Hughes & Luke, 1998). This heterogeneity in children's outcomes draws attention to the need to move beyond the question of 'if' domestic violence affects children, towards understanding 'how' and 'why' it affects them, in order to explain why some children continue to function reasonably well whilst others go on to develop long term clinically significant problems. Indeed, whilst there is a large and established body of research focusing on the specific outcomes associated with children's exposure to domestic violence, there is a dearth of research highlighting the underlying processes that explain *how* the effects of domestic violence are conveyed to children, and why some children appear resilient to the trauma of exposure to violence while others go on to develop emotional and behavioural problems (Harold & Howarth, 2004). Addressing this paucity of research now is timely, because recent legislative changes in the United Kingdom have brought the psychological consequences of children's exposure to domestic violence to the fore. Specifically, the criteria by which compulsory intervention in family life is deemed necessary, in order to protect children, have been extended, such that seeing or hearing the ill treatment of another is now regarded as a potential child protection issue (section 120, Children and Adoption Act, 2002).

In contrast to the domestic violence literature, with respect to non-violent inter-parental conflict, there is not only a long and established literature highlighting the link

between conflict in the couple relationship and children's psychological development, there is also an expansive body of research highlighting the *processes* through which inter-parental conflict affects children (Towle, 1931; Baruch & Wilcox, 1944; Gassner & Murray, 1969; Porter & O'Leary, 1980; Emery, 1982). Evidence suggests that inter-parental conflict influences children's adjustment both directly and indirectly, through the marital interaction itself, and through the effects such interaction has on other aspects of family life. Inter-parental conflict for example, is found to have implications for parents' functioning in the family context, but also has effects on children by virtue of their social cognitions and appraisal of the meaning that conflicted exchanges, occurring between parents have for their own, and their family's welfare.

In order to address the gaps in knowledge with respect to how violent inter-parental conflict exerts its effects on children, there is a call for scholars to draw on related fields of enquiry, which have developed process-oriented literatures (Jaffe, Poisson & Cunningham, 2001). Based on this rationale, this thesis sets out to examine the utility of perspectives developed to understand children's functioning in households marked by interparental conflict, for furthering our understanding of child adjustment in the context of violent inter-parental conflict. Both indirect and direct effects are proposed to be important and recently, attention has been paid to how these perspectives might be integrated to provide a more comprehensive understanding of the multiple pathways through which inter-parental conflict may affect children (Harold & Conger, 1997; Harold, Shelton, Goeke-Morey and Cummings, 2004). This thesis therefore, seeks to explore the way in which children's understanding of inter-parental conflict, *and* parent-child interactions, jointly communicate the effects of hostile and aggressive conflict to children's immediate and longer term adjustment.

Children's exposure to domestic violence

It was recently estimated that 15.5 million children in America live in families where violence has occurred at least once in the past year, and 7 million children live in families where severe violence has occurred (McDonald, Jouriles, Ramisetty-Mikler, Caetano & Green, 2006). These figures likely represent an underestimate however, in that they relate to two parent households, whereas in reality statistics show that violence is also prevalent amongst single, separated, and divorced families, a great many of which may also contain children (Finney, 2005; Kershner, Long & Anderson, 1998). It is widely documented that the severity of violence may escalate at the point of separation (e.g. Walton-Moss, Manganello, Frye & Campbell, 2005), pointedly illustrated by the finding that separation is positively related to a woman's risk of being killed by an intimate partner (Campbell et al, 2003). Further, Saathoff and Stoffel (1999) approximate that 80% of women in battered women's shelters are accompanied by one or more of their children and in concrete terms, Shankleman, Brooks and Webb (2000) estimate that about 34,000 children pass through refuge accommodation in England and Wales each year. Estimates based on 'intact' families therefore, may exclude children who have been exposed to particularly severe and frequent forms of domestic violence. In general, overall rates of intimate partner violence are found to be highest among women and men in their 20's, suggesting that young children are at a particularly high risk of exposure (Fantuzzo, Boruch, Beriama, Atkins & Marcus, 1997; Koenen, Moffit & Caspi, 2003; Moracco, Runyan, Bowling & Earp, 2007). Indeed it is estimated that over 40% of all households where intimate partner violence occurs contain children under the age of 12 (Fantuzzo et al. 1997; O'Leary, Barling, Arias & Rosenbaum, 1989).

Attempts to estimate the amount of violence to which children are exposed, commonly reveal that children are almost always aware of its occurrence, with up to 90% estimated to be in the same or the next room, or at least present in the home at the time at which an assault takes place (e.g. Hutchinson & Hirschel, 2001). Importantly, the type of conflict and violence to which children are exposed does not seem to represent a less severe cross section of inter-parental behaviours, than is reflected when there are no children present. In fact, the marital conflict literature suggests that despite parents' best efforts to protect children from exposure to hostile and violent exchanges, inter-parental conflict taking place in the presence of children may be expressed in *more, not less* destructive ways, and may be more emotionally negative than conflict which occurs in children's absence (Papp, Cummings & Goeke-Morey, 2002). It is also more likely to centre on child related topics, which are particularly distressing for children (Grych & Fincham, 1993). With respect to violent inter-parental conflict, it is found that there are no differences in weapon use or the severity of violence across households, with and without children. This suggests that the presence of children in the family does not lead to an attenuation of abuse, with the aim of shielding them from the most severe conflict tactics (Hassani, Houry, Parramore, Heron & Kellerman, 2004). Moreover, from an investigation of murders and attempted murders of women, committed by partners and ex partners, Lewandowski, McFarlane, Campbell, Gary and Barenski, (2004) approximated that in 60% of cases, children are in the household. In the majority of cases (66-88%), they suggest that children of murdered women have been exposed to severe levels of domestic violence preceding her death (e.g. Morracco, Runyan & Butts, 1998; Smith, Morracco & Butts, 1998). Furthermore, Lewandowski et al. (2004) found that in 35% of cases, children had witnessed their mother's murder, and a further 37% of children had found their mother's body. In sum, this evidence

suggests that children may be exposed to extreme forms of inter-parental conflict and violence.

Exposure to inter-parental violence poses a significant risk to children's safety. Case reviews, carried out in both the UK and the US, of children who were seriously harmed or killed by a parent, highlight that more than half of the cases involved domestic violence (Jaffe & Juodis, 2006; Saunders, 2004; Sinclair & Bullock, 2002). Inter-parental violence is associated with higher levels of physical maltreatment of children in the same family (Appel & Holden, 1998), as well as other forms of child abuse, including sexual abuse (e.g. Saunders, Williams, Hanson, Smith and Rheingold, 2002). Indeed, much of the initial focus on domestic violence in the lives of children, was as a context for child maltreatment (Bowker, Arbitell & McFerron, 1988; Hughes, Parkinson & Vargo, 1989), although more recently there has been growing recognition that exposure to domestic violence, even if a child is not the direct target, may have profound consequences for children's psychological health (English et al, 2003; Kitzmann, Gaylord, Holt & Kenny, 2003; Wolfe, Crooks, Lee, McIntyre-Smith & Jaffe, 2003).

This shift in thinking is reflected in legislative changes in the UK. The Children Act 1989 redefined childcare law, and introduced new measures for working with children and families in public and private law (Hester, Pearson & Harwin, 2007). It embodied a new approach to working with children, underpinned by the principal that the child's welfare is paramount (Hester et al., 2007). The act introduced the concept of 'significant harm', as the threshold that justifies compulsory intervention in family life in the best interests of children (Section 47, Children Act 1989). Despite this, the Act, including its ten volumes of guidance, does not explicitly acknowledge the risk that domestic violence can pose to a child's physical and psychological well being. More

recently, Section 120 of the Children and Adoption Act 2002 added to the definition of 'significant harm', so as to include the 'impairment from seeing or hearing the ill treatment of another person', bringing the issue of children's exposure to domestic violence sharply into focus.

This change in definition represents a clear shift away from simply considering domestic violence as a context for the direct maltreatment of a child, towards acknowledging that a child may suffer psychological harm in the wake of parents' violent behaviour, without ever suffering any direct abuse. Furthermore, that children are acknowledged to be affected in ways, other than through directly witnessing violence, is in keeping with recent efforts to draw attention to the many means by which children may be exposed to inter-parental violence (Edelson, 1999). Ganley & Schechter (1996) for instance, highlight several other ways in which children may experience domestic violence. These include forcing the child to participate in the abuse, threatening or striking the child whilst he/she is in his/ her mothers arms, and taking the child hostage, or threatening to kill the child as a means of indirectly harming the mother, or forcing her return to the home (see also McCloskey, 2001). Furthermore, children not only have to deal with the immediate trauma associated with violence, but also with the aftermath of the violence, such as parental stress or changes in the emotional climate of the family (Ganley & Schechter, 1996; Huth-Bocks, Levendosky & Semel, 2001). Encompassing these different types of experience, Holden (2003) suggests a taxonomy of ten categories to classify children's exposure, ranging from children who are ostensibly unaware of its occurrence, to those who witness its occurrence, and those who actively intervene in or take part in the assaults. However, as of yet there is little work that has attempted to discern the effects of these different types of exposure on children's wellbeing.

Variation in children's outcomes: The need for an understanding of process

Several recent meta analyses have shown a small, but significant association between children's broad exposure to inter-parental violence and negative adjustment problems (Kitzmann, et al, 2003; Wolfe et al, 2003). Children exposed to domestic violence are estimated to be 2 - 4 times more likely than children from non violent homes, to exhibit clinically significant behaviour problems (Cummings & Davies, 1994; Holden, 1998; McDonald & Jouriles, 1991). While exposure to violence is linked with a number of emotional, behavioural and health related problems, several studies document considerable heterogeneity in children's psychological adjustment. For example, in a study of 58 mothers and children (aged between 6-12 years) living in refuge accommodation, Hughes and Luke (1998) used cluster analysis to examine children's profiles of adjustment. Five groups of children were identified, where the largest group (36%) were found to have moderate problems (relative to the other groups). A second group, containing 26% of the sample, was found to be functioning well by virtue of their low internalising and externalising scores and relatively high self esteem. A third group were found to have high levels of internalising and externalising problems (16%), a fourth group exhibited high levels of externalising only (16%), and the remaining sample (7%) showed high levels of internalising symptoms but not externalising problems. Whilst the duration of the abuse endured by mothers did not distinguish between the clusters, mothers in the groups which were doing relatively better had the lowest depression scores, and scored lower on a measure of verbal aggression against their partner. Demographic factors did not appear to distinguish between these groups. A second study also demonstrated a similar five cluster pattern, finding that 32% of children seemed to be functioning relatively well (Hughes, Luke, Cangiano & Peterson, 1998). Significantly, this study measured the parenting of

mothers, finding that mothers with children in the well functioning group felt they were able to continue to parent to a reasonable standard, whereas mothers in other groups indicated significant parenting difficulties. Further, this group was marked by lower levels of exposure to verbal aggression, directed either towards the child or towards a parent. Finally, a study undertaken by Grych and colleagues (Grych et al., 2000) examined patterns of adjustment in a sample of 228 8-14 year old children, also residing in shelters. As in the previous two studies, the authors found that 31% of children were functioning well within the normal ranges, across measures of internalising, externalising and self-esteem. Nineteen percent of the group reported multiple problems, but with particularly high levels of externalising, and 21% of the group demonstrated externalising problems exceeding clinical thresholds, but no other problems. Eighteen percent of children were categorised as experiencing mild distress, as evidenced by slightly elevated internalising scores, and the smallest group of children were experiencing multiple problems, but with particularly high levels of internalising. Significantly, this study found that whilst the clusters were not distinguished based on mothers' reports of violence perpetrated against her, or by mothers' or children's reports of violence perpetrated by the mother against the father, the clusters did differ based on *children's reports* of violence directed by fathers towards mothers. Children in the multi-problem groups perceived significantly higher levels of violence than those children in the other three groups. These children also reported higher levels of father to child aggression, and children in the multi problem internalising group reported higher mother to child aggression, than either the no problem group or the externalising group.

The most important point to distil from these studies, is that whilst all participating children had been exposed to significant amounts of violence in their homes,

considerable variation in their functioning, across multiple indices of adjustment, was noted. Remarkably consistent across each study, was the finding that around a third of children continued to function relatively well, despite being exposed to inter-parental violence. Of further note is that across each of these studies, intra and inter child characteristics were found to distinguish amongst those children who were doing better than others at the time of study. While there can be little argument that exposure to domestic violence represents a particularly pernicious stressor in the lives of children, taken together, these studies show that some children appear to be at greater risk of psychological 'harm', than others. That exposure to inter-parental violence does not have a blanket effect on children represents a significant challenge for practitioners, as they attempt to identify *who* is most at risk of negative outcomes. Simply identifying those children who have been exposed to their parents' violent behaviour is not an adequate solution to this challenge, as evidence by the results outlined above. In a climate where resources to intervene are scare, and the number of exposed children is evidently large (Rivett & Kelly, 2006), establishing who is most in need of intervention or prevention is of paramount importance. This can only be achieved however, when we extend our understanding of *how, when* and *why* domestic violence affects children. This requires movement beyond the documentation of correlations between exposure and negative effects, towards the extensive investigation of factors that mediate, and moderate, the association between exposure and adjustment.

As it stands, much of the work relating to children's exposure to domestic violence falls in to an 'outcome focussed' category (Harold & Howarth, 2004). This has enabled researchers to establish that children are affected by inter-parental violence, and to list the ways in which this may be manifest. Process orientated work, of the type that enables explanation of why, and how exposure affects children on the other hand, is

scant within this field of inquiry (Harold & Howarth, 2004; Rivett, Howarth & Harold, 2006). In contrast, in the context of non-violent inter-parental conflict there is not only a large volume of literature highlighting the link between conflict in the couple relationship and children's psychological development, there is also an expansive body of research highlighting the processes through which inter-parental conflict affects children (Davies & Cummings, 1994; Grych & Fincham, 1990; Harold & Conger, 1997). This substantial corpus of literature has been added to steadily over the last three decades, and amassing equivalent data with respect to the effects of inter-parental violence will be an equally lengthy, and likely more challenging endeavour. It is suggested that as a solution, theoretical cross fertilisation (Jouriles, Norwood, McDonald & Peters, 2001) is necessary, where researchers should begin to synthesize the findings of other discrete but related knowledge bases, in order to speak to the processes and interplay of particular risk and protective factors, that make some children more vulnerable than others to the effects of exposure to domestic violence (Jaffe et al, 2001). The marital conflict literature perhaps represents the most obvious place at which to start this task.

The inter-parental conflict literature as a roadmap for domestic violence research

Before turning to consider whether the processes identified in the marital conflict literature are important for understanding the effects of violent inter-parental conflict on children, it is first necessary to examine the relatedness, or lack thereof of inter-parental conflict and violence, in order to articulate a rationale for applying understanding derived in one field to another, especially as there are those who argue a fundamental difference between violent and non-violent forms of marital conflict (Jouriles et al, 2001; Yllö, 1993). Expressions of conflict and disagreement are a normal part of everyday life, even in the best functioning of families, and may even be

beneficial to children, in that they afford exposure to positive examples of the constructive expression of disagreement and conflict resolution (Cummings & Wilson, 1999). On the other hand, it is difficult to think of a scenario in which expression of physical aggression could be construed as positive. Based on this thinking, and the fact that the domestic violence literature and inter-parental conflict –child adjustment literature have developed in relative isolation, it is of course conceivable that in extremely angry home environments, qualitively different relations between variables, than are found in typical community samples may be evidenced (Cummings, Hennessy, Rabideau & Cicchetti, 1994).

However, an alternative viewpoint considers that many of the same processes may underlie children's development, in the face of differing sources of adversity, including exposure to hostile inter-parental conflict and violence (Cummings & Davies, 1994; Jaffe, Wolfe & Wilson 1990, Sameroff, 2000). High rates of hostile, but non violent conflict may be a common place feature in households marked by inter-parental violence, with non violent forms of conflict representing the broader ecology in which violent exchanges take place (El-Sheikh, Cummings, Kouros, Elmore-Staton & Buckhalt, 2008). Studies find engagement in verbal aggression to be a longitudinal predictor of physical aggression, even when prior physical aggression is taken into account (Murphy & O'Leary, 1989; Schumacher & Leonard, 2005). Further, it is suggested that psychological abuse, as characterised by high levels of verbal hostility, typically co-occurs with physical aggression, with couples found to be more likely to engage in physical aggression at times when they engage in high levels of psychological aggression (Frye & Karney, 2006). Moreover, non violent conflict tactics have been found to account for unique variance in children's adjustment problems. For example, Jouriles, McDonald, Norwood, Vincent & Mahoney (1996) found that other

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forms of physical aggression, including smashing and kicking objects, and threats of violence, as well as verbal aggression (swearing and insulting partner), were related to children's adjustment problems. This finding is more recently substantiated by McDonald, Jouriles, Briggs-Gowan, Rosenfield & Carter (2007) who found very young children's (1-3 years) exposure to angry but non violent conflict to have an additive effect on their adjustment problems, even after exposure to physical violence was accounted for. Collectively, these results suggest that hostile, but non violent conflict, and marital violence may be intimately intertwined, and thus it is easy to imagine how, in violent households, exposure to non violent conflict may activate children's concerns that violence is about to follow. What is more, the distress caused by violent and non violent conflict tactics may vary as a function of parent gender. In examining children's emotional responses to a series of taped presentations of conflict behaviours, occurring during or at the end of conflicts, Goeke-Morey and colleagues (Goeke-Morey, Cummings, Harold & Shelton, 2003) found that depictions of fathers' physical aggression towards a spouse was more distressing and evoked a child's stronger sense that they would intervene, than other tactics. On the other hand, mothers' threats to the intactness of the family and physical aggression towards an object had the most negative effects of children's reported emotional and behavioural reactions. Therefore, from the child's perspective, non-violent but hostile behaviours enacted by mothers may be just as upsetting, as exposure to fathers' aggressive behaviour towards their spouse. Therefore, it may be important to consider the broader conflict behaviours of both parents when the couple relationship is marked by violence.

Following on from this, there is some argument that inter-parental conflict and violence may differ fundamentally, based on the frequency with which conflict and violence are initiated by each spouse, with the former conceptualised as bidirectional,

with husbands and wives having an equal part to play in its instigation. In contrast, domestic violence is more often conceived of as a unidirectional phenomenon, perpetrated by males against their female partners. This argument may caution against the extension of models, explaining children's adjustment in the context of non violent conflict, to violent family contexts. However, Johnson (1995) argues that in a large number of cases, violent couples engage in a high degree of mutual combat, with a smaller proportion of couples being characterised by high rates of largely male to female directed violence. Supporting this viewpoint, several seminal meta analyses conducted in the last decade indicate that women may be more likely to perpetrate physical aggression towards a partner, as well as perpetrate violence more frequently than men (Archer, 2000; Archer, 2002). However, these results are generated from a sample of studies in which there is an over representation of younger dating couples. When effects were examined, based on studies which sampled women living in refuge accommodation and couples seeking assistance for marital problems (violence, alcoholism), this effect was reversed, with violent behaviour more frequently enacted by males (Archer, 2000; Archer, 2002). These studies suggest that the dynamics underpinning couple violence may differ according to the sample surveyed, yet studies that focus on the number of acts perpetrated by males and females are argued to generate an inaccurate picture of couple violence, irrespective of the sample considered (e.g. Dobash, Dobash, Wilson & Daly, 1992). Studies focussing on the frequency of violent acts are criticised for not taking into consideration the consequences of male and female perpetrated violence, the argument being that when the injuries suffered at the hands of a partner are taken account of, a greater proportion of female victims are evident. The aforementioned meta analyses support this position. Further, it is found that men are more likely than women to engage in

very serious acts of violence, such as beating up and strangling a partner (Archer, 2002). Notably however, women are found to be more likely to throw something at a partner, slap, kick, bite, punch, and hit their partner with an object, although again this effect appears to be reversed when clinical groups are considered. Whilst these behaviours are potentially less lethal than those more likely perpetrated by men, they nevertheless indicate that women, particularly in community samples, engage in some degree of significant physical violence against their partners. Therefore, many children exposed to violence may in fact be exposed to both mothers' and fathers' aggression. What is more, each parent's behaviour may have unique effects on children's evaluation of the quality of their parents' relationship. Grych (1998) found that both fathers' aggression directed towards mothers, and mothers' aggression towards fathers independently predicted children's evaluation of conflict as threatening (Grych 1998). This finding is echoed by a more recent test, in which verbal and physical aggression against both parents was associated with children's emotional insecurity, indicating that both parents' aggression causes children concern. Thus, whilst a father's violent behaviour may have a greater chance of inflicting damage, children may be distressed by both parents' violence, owing to the message it conveys with respect to the integrity of the inter-parental relationship and the family as a whole. That both parents' violent behaviour may be important in understanding children's evaluations of the quality of family relationships is in keeping with the literature relating to processes underpinning adjustment the context of non violent inter-parental conflict.

Taken together, this work suggests that in examining children's responses to inter-parental violence, it is important to consider the constellation of conflict behaviours to which they have been exposed, and that in attempting to understand the

impact of inter-parental violence from the child's perspective, studies should take into account that mothers, as well as fathers, may be the perpetrators of violent behaviour against their spouse. With this in mind, it seems that expressions of conflict and violence between parents may not be, in many instances, as distinct as argued by some scholars and thus, perspectives developed with respect to children's exposure to non violent inter-parental conflict may have something to offer; first, in understanding how domestic violence may impact on children, and second, as a roadmap for guiding the direction of future research efforts to test empirically grounded hypotheses.

Inter-parental conflict and violence and children's psychological adjustment

The bodies of empirical literature relating to inter-parental conflict and domestic violence respectively, clearly establish that children are adversely affected across a whole host of outcomes, by exposure to their parents' conflicted and aggressive marital exchanges. Research in both literatures has measured effects along broad indices of adjustment, namely internalising symptoms (Adamson & Thompson, 1998; Grych, Harold & Miles, 2003; Harold, Fincham, Osborne & Conger, 1997; Hazan, Connelly, Kelleher, Barth & Landsverk, 2006; Tuppett, Yates, Dodds, Soufre & Egeland, 2003) and externalising problems (Jaffe, Wolfe, Wilson & Zak, 1986; Harold et al., 1997 Hazan et al., 2006; Tuppett et al, 2003). Inter-parental conflict and violence are linked with children's specific internalising symptoms including, depression (Johnston, Gonzalez & Campbell, 1987; Peterson & Zill, 1986), anxiety (Long, Slater, Forehand, & Fauber, 1988), and low self-esteem (Amato & Keith, 1991). Studies documenting an association between parents' conflict and externalising behaviours have also examined a range of negative outcomes including conduct disorder (Johnson & O'Leary, 1987), aggression (e.g. Cummings, Goeke-Morey & Papp, 2004; Johnston & O'Leary, 1987), delinquency, and antisocial behaviour

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(Peterson & Zill, 1986). Children from high conflict homes have also been found to manifest elevated levels of excessive aggression, unacceptable conduct, vandalism, non-compliance and delinquency (Cummings & Davies, 1994). Studies often use several indicators to measure children's internalising and externalising problems and as a result, research groups may operationalise these constructs in slightly different ways. For example, with respect to internalising symptoms, Harold and Conger (1997) utilised measures of children's depression, anxiety and hostility - operationalised as internalised hostile thoughts; whereas Grych et al. (2003) used measures of children's dysphoria, depression and anxiety, as well as social withdrawal, to assess children's symptoms. Common to almost all articulations of internalising however, is the assessment of children's depressive symptoms, which are frequently indexed by the anxiety/depression subscale of the Child Behaviour Checklist (CBCL, Achenbach, 1991a). Therefore, there is a good degree of overlap in the types of symptoms that studies tend to measure. Similarly, there is variation in the operationalisation of children's externalising behaviours; with some studies utilising measures of aggression and delinquency (Harold & Conger, 1997), and others, children's and teachers' ratings of aggression (Grych et al., 2003). Again though, this measure is typically anchored by a core component – children's aggressive behaviour. Thus, whilst there may be some variation in the measures and raters used to assess this construct, there is typically commonality in the conceptual focus of this index of adjustment across studies.

Internalising symptoms and externalising problems are not considered to be mutually exclusive (Barnow, Lucht & Freyberger, 2001; Sameroff et al., 2000; Steiner, Garcier & Matthews. 1997), with some children showing elevated symptom levels across both indices of adjustment. Children who manifest co-occurring indices of

externalising behaviours and internalising symptoms, have been found to have the least warm and most hostile parents at an earlier period in their life (Ge, Best, Conger, & Simons, 1996). This is also echoed in findings relating to domestic violence (Grych et al., 2000; Hughes et al., 1998). Children exposed to inter-parental violence have been shown to exhibit elevated levels of Post Traumatic Stress Disorder and symptomolgy (e.g. Graham-Bermann & Levendosky, 1998a; Levendosky, Huth-Bocks, Semel & Shapiro, 2002; Lehmann, 1997), which in turn have been associated with higher levels of internalising and externalising behaviour (Graham-Bermann & Levendosky, 1998a; Moretti, Obsuth, Odgers, & Rybee, 2006). The few studies which have compared the incidence of problems amongst children exposed to violent and non violent conflict have produced mixed results across a number of different methodologies. For example, Hershon & Rosenbaum (1985) found no difference between children exposed to violence and those who were not, qualified by the fact that families showed comparable levels of inter-parental distress. However, in a more recent study, McDonald, Jouriles, Norwood, Shinn-Ware & Ezell (2001) found husbands' marital violence to be associated with children's increased risk for internalising and externalising problems, above and beyond levels of general relationship discord, as well as parent- to- child directed aggression and demographic variables. They also noted that the level of violence recorded in their sample was relatively low; underscoring that even in mild form inter-parental violence may be predictive of child problems over and above the effects of non-violent conflict.

Links are also demonstrated between children's exposure to violence and conflict, their functioning in social contexts outside of the family, children's academic attainment, and their engagement in risky health behaviours (Conger, Elder, Melby, Simons, & Conger, 1991; Harold, Aitken, & Shelton, 2007; Huth-Bocks et al, 2001;

Koenen, et al, 2003; McCloskey & Stuewig, 2001, Paley, Conger & Harold, 2000). There is also some evidence to suggest that children exposed to violence may show higher rates of physical ill health, and poor quality sleep (El-sheikh, Buckhalt, Mize & Acebo, 2006; El-Sheikh, 2008).

Clearly then, children's exposure to interparental violence and conflict has the potential to impact on multiple domains of child functioning. However, the evidence presented here speaks to an *increased risk* of negative child outcomes in the context of adverse family contexts, rather than an *inevitability* that children exposed to marital conflict and even marital violence will manifest serious emotional, behavioural, or health related problems. As the studies reviewed earlier reveal, even in the face of significant adversity there is considerable variation in children's adjustment (Grych et al., 2000; Hughes & Luke, 1998; Hughes et al., 1998). The development of theoretical frameworks, attempting to explain the relationship between inter-parental conflict and child adjustment problems, has focused on two ways in which children are exposed to animosity occurring in the marital relationship (1) indirectly via altered parent-child relations and, (2) directly via exposure to marital conflict exchanges. Both forms of exposure have been associated with increased adjustment problems in children, and may give some account of children's different levels of adjustment in the face of similar experience.

The parent-child relationship in the context of inter-parental conflict

Considerable research has been undertaken to examine how negative events in the inter-parental relationship impact on the parent-child relationship (Cox, Paley & Harter, 2001). Underpinning this work are two contrasting hypotheses, which attempt to specify the nature and direction of relations between the inter-parental and parent-child subsystems. The compensation hypothesis proposes that individuals seek out

more satisfactory experiences in a particular relationship, in order to compensate for deficiencies experienced in other relationships (Erel & Burman, 1995). This hypothesis specifically proposes a negative association between satisfying marital relations and the quality of the parent-child relationship (e.g., Brody, Pellegrini, & Sigel, 1986; Goldberg & Easterbrooks, 1984). For example, the compensatory hypothesis would predict that a parent, who does not fulfil his or her personal needs for intimacy, love, and warmth in the marital relationship, seeks to satisfy these needs in the parent-child relationship (Erel & Burman, 1995). A stronger investment in the child, therefore, is likely to occur when parents experience deficits in their perceived levels of marital quality (Engfer, 1988). Brody et al., (1986) suggest however, that compensation by the mother is in response to the father's negative exchanges with the child, rather than as a direct attempt to compensate for problems in the couple relationship. This is captured by the findings of Levendosky, Huth-Bocks, Shapiro & Semel (2003), which showed that women experiencing more severe domestic abuse reported more effective parenting, and more securely attached preschoolers. This is largely at odds with other quantitative studies which more often than not, conclude that domestic violence results in diminished parenting (Holden & Ritchie, 1991; Holden, Stein, Ritchie, Harris & Jouriles, 1998; McCloskey, Figuerdo, Koss, 1995). Nevertheless, the different relationships that a child may have with each parent in the context of marital conflict, whereby one is generally positive and the other is characterised by negativity, gives rise to the potential for overall negative child effects in the long term.

The spillover hypothesis purports that supportive marital relationships and family environments are generally associated with warm, responsive, and involved parenting (Belsky, 1990; Erel & Burman, 1995). Parents experiencing marital problems are likely to become less involved, and less effective in engaging with their children

(Onyskiw & Hayduk, 2001). It is proposed that negative emotion, mood, or interactional style, engendered in the couple relationship, is transferred to the parent child-relationship (Engfer, 1988; Erel & Burman, 1995). Whilst Margolin, John, Gosh & Gordis (1996) suggest that the spill over of tension from one family subsystem to the other, is a phenomena that characterises most families at one time or another, they argue that it occurs with greater regularity in distressed, as compared to non distressed families. In a meta analysis of 68 studies Erel and Burman (1995) found evidence of a spillover, rather than compensation effect and went on to postulate several mechanisms through which emotion engendered in the couple relationship may be communicated to interactions between parents and their children.

Modelling: Parents involved in a relationship marked by marital distress engage in, and thus model, negative interactions that are lacking in warmth and care. Conversely, parents experiencing positive marital relations model more functional interactions, which are marked by greater warmth and care, than hostility (Burman, Margolin, & John, 1993). The suggestion that the quality of the marital relationship, as witnessed by children, determines the quality of the parent-child relationship is underpinned by the theoretical foundations of social learning theory. Social learning theorists suggest that children's behaviour can be greatly influenced by learning, as a result of observing behaviour modelled by parents (Grusec, 1992). As parents engage in aggressive behaviours, their position as authority figures communicates to children that hostile behaviour is an acceptable means of exchange (Cummings & Davies, 1994). This aspect of a social learning approach to understanding inter-parental and parent-child interaction, is consistent with a spillover hypothesis, in its prediction that conflicted behaviours that occur in the context of the inter-parental relationship will also be observed in the parent-child relationship. One study found that when parents engaged in

marital conflict, adolescents behaved more aggressively towards their parents, especially towards their mothers (Davis, Hops, Alpert, & Sheeber, 1998). In general though, evidence for a modelling hypothesis is equivocal whereby children are not always found to directly mimic angry exchanges (e.g. Davies, Harold, Goeke-Morey & Cummings, 2003; Goeke-Morey, Cummings, Harold & Shelton, 2003).

Socialisation: The socialisation hypothesis suggests that parents experiencing relationship problems tend to use "less consistent discipline practices", and "less optimal parenting techniques", than parents involved in non-discordant marital relations (Erel & Burman, 1995). A large number of studies have demonstrated an association between inter-parental conflict and the spillover of affect, in the form of increased hostility toward both younger and older children (Harold et al, 1997; Fauber, Forehand, Thomas & Wierson, 1990). Hostile parenting in turn has been linked with children's depression and conduct problems (Buehler & Gerard, 2002; Erath, Bierman & the Conduct Problems Prevention Research Group, 2006; Roosa, Tein, Groppenbaucher, Michaels & Dumka, 1993). There is also some evidence to suggest that children living in violent homes, are subject to greater levels of mothers' and fathers' controlling and coercive behaviour, and harsh forms of discipline (Holden et al, 1998; Margolin, Gordis, Medina & Oliver, 2003; Margolin et al, 1996). In its extreme form, punitive harsh parenting may warrant a definition of child abuse, which noted earlier, is more common in violent family contexts (Appel & Holden, 1998; Tajima, 2002).

Researchers have also highlighted other aspects of parenting that might suffer in the wake of inter-parental conflict. For example, parents absorbed in marital difficulties have been described by Katz and Gottman (1996), as allocating a 'lack of cognitive room' to their children, which may result in parents' lack of warmth, or their withdrawal from their relationship with their child. In support of this notion, Sturge-

Apple, Davies & Cummings (2006) showed that inter-parental hostility and withdrawal were associated with parent emotional unavailability one year later. Unresponsive parenting, or parent-child interactions lacking in parental warmth, may have significant implications for the quality of children's attachment to a parent (e.g. Goldberg & Easterbrooks, 1984), and may also have ramifications for children's ability to regulate their own negative affect, as well as their ability to respond empathically and prosocially to others (Davidov & Grusec, 2006).

The consistency with which parents parent, may also be impacted upon by discordant marital relations (Fauber et al, 1990; Holden & Ritchie, 1991; Margolin et al., 2003; Stoneman, Brody & Burke, 1989), although within the context of domestic violence there is some suggestion that this may be a conscious decision dependent on contextual factors, in order to protect children from greater harm at the hands of a violent father (Holden & Ritchie, 1991). Inconsistencies in parents' discipline practices may stem from more than one source. In particular, parents involved in a discordant relationship may fail to communicate with each other regarding appropriate disciplinary practices. Such discrepancy may lead to differential parenting practices, thereby increasing the likelihood for conflict to occur in either the mother-child or father-child relationships. Rather than co-operating in the task of effective co-parenting, parents embroiled in marital difficulties tend to be hostile and competitive with respect to couple and child-related issues, be ineffective as a team in helping their children deal with general problem solving, and express inconsistent and discrepant expectations for their children (Kitzmann, 2000). There is also some evidence to support the association between domestic violence and diminished co-parenting processes (Katz & Low, 2004). This pattern of family interaction during infancy has been shown to forecast children's depression five years later, even after controlling for mothers depressive

symptoms (Jacobvitz, Hazan, Curran & Hitchens, 2004). The formation of cross generational alliances, that may arise when parents are not united, may have a detrimental impact, not only on the relationship with the parent against whom the child is expected to turn, but also with the parent with whom the child is expected to align (Cox et al., 2001). A child may feel anger or resentment against a parent for expecting him/her to 'choose sides'.

Scapegoating: This perspective is one of the least investigated theoretical proposals aimed at explaining the relationship between inter-parental and parent-child conflict. Essentially, the scapegoating hypothesis, derived from a family systems perspective (Minuchin, 1988), suggests that parents engaged in marital conflicts focus their attention on child related problems, in order to distract their attention from the initial source of the conflict: their own relationship (Vogel & Bell, 1960). This strategy reduces strain on the couple relationship by redirecting attention toward the child, but leads to an increase in rejecting behaviour by the parent toward the child (Fauber et al., 1990). Holden et al. (1998) indicate that children are sometimes blamed by their parents for fathers' physical assaults of their mothers, perhaps in an attempt to shift the focus away from a dysfunctional marital relationship on to a 'problem' child. In this sense, a child's behaviour problems may serve a homeostatic function in some families (Kaczynski, Lindhal & Malik & Laurenceau, 2006) and thus, child problems may be inadvertently maintained by maladaptive parenting behaviours (Minuchin, 1974).

Family Stress: The fourth spillover mechanism is also primarily derived from a family systems tradition. In a well-functioning family system, family members form a cohesive group. According to family systems theory, the interaction between family members is in part governed by interpersonal boundaries, a set of implicit rules that regulate the level of intimacy and contact between family members, and which

communicate to individuals the way in which they should function in relationships (Minuchin, 1974). Under stress however, these boundaries may become less defined and the balance in any set of family relationships (husband-wife, mother-son, father-daughter etc.,) may be adversely affected (Kitzmann, 2000). Families may endure stress for many reasons, for example economic pressure, work, stress, and parent psychopathology. These factors have been shown to impinge on family relationships (Conger et al., 1991; Conger, Wallace, Sun, Simons Mcloyd & Brody, 2002; Downey & Coyne, 1990; Repetti, 1989; Schulz, Cowan, Pape Cowan & Brennan, 2004), although marital conflict also represents a stressor in its own right.

Taken together, evidence relating to the four processes through which marital emotion may spill over to affect children, suggests that the parent-child relationship may struggle to remain unaffected within the context of both violent and non violent conflict occurring between parents. Indeed, work undertaken during the last three decades has found parenting processes to mediate both concurrently and longitudinally, the effects of inter-parental conflict on children (Fauber et al., 1990; Harold et al., 1997; Schoppe-Sullivan, Schermerhorn & Cummings, 2007).

While the literature outlined above documents support for the impairment of parent-child relations in the context of inter-parental conflict, research has also considered other mechanisms through which parents' conflict might affect children. Emery, Fincham & Cummings (1992), suggest that the impact of marital conflict on children can not be reduced to parenting problems alone. They argue that overt inter-parental conflict to which children are exposed, has a greater impact on child adjustment than covert conflict, to which children are not exposed, and that such differences would be unlikely if all effects were mediated through parent-child relations. Research has demonstrated how conflict between parents produces

behavioural, cognitive, emotional, and physiological responses in children, in the absence of a parent-child exchange (Emery et al, 1992; Cummings, Zahn-Waxler, & Radke-Yarrow, 1981, Davies, Myers & Cummings, 1996). The conflict between parents to which children are exposed, can range in expression. The direct effect of inter-parental conflict on child adjustment difficulties has been found to partly depend upon the child's appraisal of the interaction as intense, frequent, child-related and unresolved (Grych, Seid & Fincham, 1992). For example, children from homes marked by frequent inter-parental conflict, compared to children from homes with less conflict, demonstrate more negative emotional reactions and make more attempts to intervene in naturally occurring episodes of conflict (Cummings et al., 1981). The messages contained in conflict have also been found to be disturbing for children, such as threats to leave (Laumakis, Margolin & John, 1998). Non-confrontational forms of conflict have been found to have detrimental effects on children. For example, children's reactions to non-verbal anger (the silent treatment) and withdrawal indicate that they are significantly distressed by such behaviour (Cummings, Ballard & El-Sheikh, 1991; Katz & Gottman, 1993). The parent who withdraws from a negative marital exchange communicates a lack of concern for conflict resolution to the child (Cox, Paley & Payne, 1997). These research findings suggest that not only are children accurate observers of the emotional content of conflict episodes, but they also appear to actively interpret the meaning of such behaviours for family relations and their own well-being.

The role of children's appraisals

Consistent with a social cognitive perspective, one of the challenges in investigating the link between family relationships and children's adjustment, is to assess not only how parent behaviour affects children but also how the experience or

meaning that interactions between parents effect children (Hinde & Stevenson-Hinde, 1988). Research on the direct effects of conflict has emphasised the role of children's perceptions of, and reactions to, specific aspects of inter-parental conflict; arguing that it is not inter-parental conflict per se, but children's interpretations of inter-parental conflict that determines whether the conflict is harmful to them. Children actively interpret and respond to their environment, and closer attention to their cognitive, emotional and behavioural responses to parents' conflict is important for the development of a meaningful theoretical framework, capable of accounting for why individual differences exist in child adjustment to inter-parental conflict (Fincham, Grych & Osborne, 1994; Harold & Conger, 1997).

In the first instance, assessing conflict from children's, rather than parents' perspectives, may be crucial from the standpoint that children and parents may endorse the occurrence of different events, as they are perceived as more, or less important to them (Jouriles, Norwood, McDonald and Peters, 2001). Parents' and children's reports of inter-parental conflict and violence are filtered through their own experiences, and reflect what is most salient to them. Parents and children may be aware of, attend to, and remember different aspects of parental interactions, (Grych et al, 2000, p1658). For example, Jouriles et al (2001) suggest that in the case of violent inter-parental conflict, parent and child accounts may diverge, in that parents may recall events that are psychologically, as well as physically painful, whereas children may recall events that were particularly frightening to them, irrespective of the physical harm inflicted on a parent. Likewise, parental disagreement over something relatively trivial, but that which resulted in disruption of a goal that was particularly important to the child, may be more well remembered than conflict that parents deemed to be more serious (Crockenberg & Langrock, 2001). Therefore, children's

reports of inter-parental conflict and violence may provide a more accurate representation of their experience, and therefore may be more important in understanding the effects of parent behaviour on child adjustment (Jouriles et al, 2001). Indeed, children's reports of inter-parental conflict and violence have been shown to be more closely related to indices of emotional and behavioural adjustment than parent reports (Grych, Seid & Fincham, 1992; Kerig, 1998a).

Several theoretical perspectives have emerged within the inter-parental conflict literature, all of which emphasise the importance of the child's viewpoint in determining the impact of conflict on their own adjustment. Common to all, is the theme that the meaning of the conflict exchange for children is crucial to understanding its effects (Grych & Cardoza-Fernades, 2001). Grych and Fincham (1990) propose a conceptual framework, grounded in Lazarus and Folkman's (1984) appraisal and coping framework. According to this perspective, the impact of inter-parental conflict on children, depends both on how the conflict is expressed, and how children interpret its meaning and potential implications for their well being. These authors propose two stages of cognitive processing underlying the link between children's exposure to inter-parental conflict and their interpretation of its meaning. The first of these, primary processing, is a stage where the child first becomes aware that conflict is occurring, and experiences an initial level of arousal in response to its detection. In particular, a child may attempt to extract information regarding the conflict's negativity, and the degree of threat that it poses. Perceived threat is conceptualised as the extent to which children believe conflict will escalate, result in harm to oneself, or to family members, or threatens the family's existence. Specific characteristics of the conflict episode, such as its frequency, intensity, or resolution potential, and contextual factors such as the quality of parent-child relations, are proposed to influence this initial stage of appraisal.

This 'primary' stage of processing may then lead to a more elaborate stage of processing, known as secondary processing, during which the child attempts to understand why the conflict is occurring, and what he or she should do in response. Secondary processing involves making an attribution for the cause of the event, ascribing responsibility and blame, as well as generating efficacy expectations relating to the child's ability to cope with the conflict. Coping efforts are proposed to be highly influenced by children's appraisals of threat, but also feed back into the extent to which children feel threatened. For example, a sense of being able to cope may reduce children's appraisals of threat. At the core of the model is the proposition that appraisals evoked by the conflict, and the coping efforts that ensue, account for the variation in children's adjustment, rather than conflict per se.

Conflicts that are frequent, hostile, poorly resolved, and child-oriented are predicted to be more likely to be perceived as threatening, and to elicit children's beliefs that they are in some way to blame for its occurrence (Grych & Fincham, 1990, Grych, 1998). Children who view conflict as threatening or feel unable to cope effectively are hypothesised to experience more anxiety and helplessness when conflict occurs, and those who blame themselves for parental disagreements or feel responsible for helping to end them are proposed to experience guilt, shame, and sadness (Grych & Fincham, 1990). If conflict is frequent, and children generate these types of appraisals on a regular basis, then it is proposed that high levels of perceived threat and blame greatly increase children's risk for adjustment problems, particularly internalising symptoms (Grych & Fincham, 1990; Grych, Fincham, Jouriles & McDonald, 2000).

The cognitive contextual framework (Grych & Fincham, 1990) contends that children's appraisals will be affected, not only by the specific properties of the conflict, but also by the context in which conflict occurs; including both distal and proximal

contexts. Grych and Fincham (1990) describe how contextual factors provide a backdrop against which conflict episodes are perceived and interpreted. It is argued that key contextual factors include past experience of inter-parental conflict, perceived emotional climate, child temperament and gender. For example, rather than becoming accustomed to high levels of conflict, children who have been exposed to previous conflict that was frequent, intense, and poorly resolved have been shown to become increasingly sensitive and reactive to further episodes of conflict or violence (Cummings, 1998; Davies, Myers, Cummings & Heindel, 1999; Davies, Sturge-Apple, Winter, Cummings & Farrel, 2006; El-Sheikh & Cummings, 1995). Children with a history of exposure to inter-parental violence have also been shown to have a greater tendency to mediate as a third party in their parents' disputes (J.S. Cummings, Pellegrini, Notarius & Cummings, 1989). In particular, some studies have noted an increased propensity to become involved in inter-parental conflict amongst boys (Jenkins, Smith & Graham, 1989; O'Brien, Margolin, John & Krueger, 1991), underscoring the importance of child gender as a factor to consider in understanding children's affect, and coping behaviour that occur in response to marital conflict.

Emotional security hypothesis

Whilst Davies & Cummings (1994) acknowledge cognitions as important for coping processes, their emotional security hypothesis places greater emphasis on emotionality in explaining children's reactions to marital conflict (Cummings, 1998). They posit that children's sense of emotional security is derived, not only from their attachment to their parents or primary caregivers but also importantly from the quality of the inter-parental relationship. In turn, they suggest children's concerns about emotional security play a role in their regulation of emotional arousal, organisation of cognitions, and motivation to respond in the face of inter-parental conflict, and that

over time these response processes have implications for children's long-term adjustment. Emotional security is seen as a product of past experience and a primary influence on future responding.

Rather than a process in and of itself, Davies and Cummings (1994) conceptualise emotional security as a latent goal, the preservation of which is maintained through three component processes (Davies et al., 2002). When children are exposed to the conditions of marital conflict, effects are determined through (1) *Emotional regulation*: Children may be activated to feel anger, sadness, fear, relief, or happiness depending on how conflict between parents is expressed and managed. The implications for children's functioning is determined by how much a child feels sad or angry or other emotional reactions, and how well the child can regulate the activation of such emotions, (2) *Cognitive representations*: Children assess how much of a problem a given conflict expression constitutes and its potential to adversely influence other family relations. Children from high conflict homes, therefore, would be expected to be more prone to developing insecure internal representations of family relations than others, (3) *Behavioural regulation:* What children do in response to the conflict behaviour demonstrated by parents. For example, children might attempt to regulate exposure to marital conflict by actively intervening, or, alternatively, withdrawing from or otherwise avoiding a destructive conflict setting.

According to the emotional security hypothesis, therefore, exposure to negative forms of inter-parental conflict compromises children's sense of emotional well being. When exposed to models of negatively expressed and managed marital events, children are motivated to preserve and promote their own sense of emotional regulation, cognitive representations and behavioural regulation in the context of broad family relations. Inter-parental conflict, it is proposed, has its effects on children not so much

through the occurrence of conflict *per se* but rather through the ways conflictual issues are expressed and managed by parents. Destructively managed issues reduce children's sense of emotional security, and it is this, the theory postulates, which conveys the effects of inter-parental behaviour to children's adjustment (Davies & Cummings, 1998).

In initial tests of this perspective, Davies and Cummings (1998) found that the link between exposure to inter-parental conflict and children's internalising and externalising was mediated by children's appraisals of emotional insecurity relating to the inter-parental relationship. Specifically, children's emotional reactivity and their internal representations of family relations were most closely linked with inter-parental relations and child adjustment, especially with regard to internalising symptoms. Building on these findings a recent longitudinal examination showed that emotional security, in the context of inter-parental conflict, linked inter-parental discord to children's internalising and externalising symptoms two years later, even when initial symptom levels were controlled (Cummings, Schermerhorn, Davies, Goeke-Morey & Cummings, 2006). Significantly, this was found to be the case across samples of both younger and older children. Emotional security has also been found to partially mediate the association between broader constellations of family processes, which emerge from interrelationships between inter-parental, co-parenting and parent-child relationships, and children's adjustment, particularly internalising symptoms (Davies, Cummings & Winter, 2004).

Whilst the cognitive contextual framework (Grych & Fincham, 1990) and the emotional security hypothesis (Davies & Cummings, 1994) are often directly compared in their ability to explain the association between conflict and child adjustment, primarily because one is seen to emphasise cognition and the other emotion

(Crockenberg & Langrock, 2001), they actually represent complementary perspectives (Davies et al., 2002). They both underscore children's perceptions and interpretations of conflict as important for shaping its effects on children (Fosco, DeBoard & Grych., 2007). As Fosco and colleagues (2007) point out, cognition and emotion are in actual fact inextricably linked in the process of deriving meaning from salient events (Fosco et al., 2007). For example, children who perceive threat may likely feel fearful, and children who hold negative representations relating to the course of a conflictual exchange, are more likely to experience more fear than those who do not expect conflict to escalate and remain unresolved. Conversely, children's emotional state may have an impact on the way an interaction is appraised. For example, children's feelings of worry may heighten their appraisals of threat (Suarez-Morales & Bell, 2006). Further, children who feel angry may be more likely to perceive hostile intent where none was meant (Mayer & Hanson, 1995).

The conceptual overlap of the two perspectives is illustrated in a recent study by Harold, Shelton, Goeke-Morey and Cummings (2002). Longitudinal data were used to examine how proposals from both models might be integrated. Effects were found whereby inter-parental conflict was related to threat, blame, and appraisals of emotional security, although only emotional security was in turn related to both internalising and externalising symptoms. Children's appraisals of threat and self-blame were linked to adjustment problems through co-varying relationships with emotional security. The fit of this integrative model was significantly better than models examining either process alone, so rather than providing support for one conception over the other, the findings demonstrate that both processes are important, with appraisals of threat and blame playing a role in explaining maladjustment by undermining children's feelings of security (Harold et al., 2002). This is supported by Buehler, Lange & Franck's (2007)

more recent findings, although in contrast they found that children's appraisals of blame (but not threat) and indicators of the component processes of the emotional security hypothesis (cognitive representations, emotional dysregulation and avoidance) served as independent mediators of marital hostility on internalising symptoms. Further, only appraisals of threat and blame mediated the association with externalising problems, although in this case, increased levels of threat predicted less acting out behaviour which, the authors suggest may reflect children's efforts to be on their best behaviour, in order to minimise cause for argument (Emery, 1988). It is unclear therefore, as to whether children's appraisals of threat, self blame and emotional security serve as independent processes, which explain unique variance in children's adjustment, as in line with Buehler's findings, or whether they comprise part of a single overarching mechanism, as the findings of Harold et al. (2002) would seem to suggest. Further research is required to address this issue.

The work reviewed thus far illustrates that children may be adversely affected by inter-parental conflict both directly and indirectly. However, current thinking has moved beyond considering direct *or* indirect processes as sole determinants of children's maladaptive responses to inter-parental conflict, to consider how children's perceptions and attributions about family life, as well as the quality of relations between children and their parents, may operate in concert to shape children's adjustment (Fincham et al., 1994). This is consistent with a process oriented approach to understanding child development, which advocates exploration of multiple influences on child development (Cummings & Davies, 2002), and is likely to yield a more comprehensive understanding of the effects of family functioning on children (Cummings, Davies & Campbell, 2000). In line with this thinking, Harold and colleagues (Harold & Conger, 1997; Harold et al, 1997) propose a family wide model

which integrates the notion that the effects of marital conflict are communicated via changes in the quality of the parent child relationship (Erel & Burman, 1995; Fauber et al., 1990), with perspectives that emphasise children's appraisals of family relationships (Davies & Cummings, 1994; Grych & Fincham, 1990) as important predictors of adjustment. These authors propose a model whereby inter-parental conflict and parent-child hostility respectively, affect children's perceptions of conflict both *between,* and *with* their parents. Children's perceptions of inter-parental conflict and parent-child hostility, in turn, are hypothesised to affect their concurrent, or immediate, and longer-term symptoms of psychological distress. While conflict between parents, and between parents and children, is proposed to affect 'how' children see these respective relationships, the proposed link from perceptions of inter-parental conflict to children's perceptions of parent hostility suggests that children's appraisals of how parents behave toward each other, determines how children expect their parents to behave toward them. These perceptions then jointly activate children's immediate internalising and externalising symptoms respectively, and go on to influence their longer-term symptoms of psychological distress. In a concurrent analysis, perceptions of inter-parental conflict had direct and indirect effects, through perceptions of parent-child hostility, on children's internalising symptoms, and indirect effects only on externalising behaviours (Study 1, Harold & Conger, 1997). In a second analysis, interparental conflict influenced children's adjustment problems through both perceptions of conflict frequency, and parent hostility in the short term, while awareness of conflict frequency was indirectly linked with adjustment problems twelve months later, through perceptions of parent hostility. These findings support the view that children's appraisals of inter-parental conflict and parent-child hostility mediate the impact of inter-parental conflict and parent-adolescent hostility on children's distress

(Harold et al., 1997; Harold & Conger, 1997). This perspective in particular, illustrates how researchers have begun to think about the complex processes through which parents' conflict may influence children's psychological well being and moreover, how children's appraisals of multiple family relationships may operate together to determine adjustment. The proposed relationship between children's appraisals of the inter-parental and the parent-child relationships, and the way that these appraisals operate jointly to convey the effect of inter-parental conflict to children, serves as the bedrock on which the rest of this thesis is built.

The role of child age

Developmental psychologists identify several sensitive periods during which, children may be more adversely affected by stressors such as inter-parental conflict (Cummings et al., 2000). The transition from childhood to adolescence for example, is thought to represent a sensitive period because children encounter several normative tasks, the negotiation of which may require considerable adaptation and psychological resources in order to maintain equilibrium (Dorn & Chrousos, 1993; Spear, 2000). Stressful or traumatic experiences occurring during this time may have a particularly profound effect on adjustment, as adolescents' psychological resources are already stretched in dealing with changes, such as a move to secondary school and puberty (Buehler et al., 2007, Flook & Fluigini, 2008; Steinberg, 2005). On the other hand this vulnerable period may be offset by children's greater repertoire of coping skills, greater autonomy, and access to extra-familial sources of support (Cummings et al., 2000). Indeed, the literature to date has not identified one age group as particularly vulnerable to the effects of inter-parental conflict (e.g. Buehler, Anthony, Krisnakumar, Stone, Gerard & Pemberton, 1997) or violence (Wolfe et al, 2003). Children of all ages appear to be adversely affected by discordant and violent marital relations, from infants

as young as 6 months, to young adults (e.g. Shred, McDonnell, Church & Rowan, 1991; Bickham & Fiese, 1997). However, relatively little work has examined the role of age in moderating links between inter-parental conflict and parent-child relationship quality or relationship quality and adjustment (Erel & Burman, 1995), although research does suggest that children's emotional and behavioural responses to inter-parental conflict may vary with age. As Cummings and Davies (1994) describe, toddlers rarely become directly involved in conflict (Cummings et al., 1981), whilst by middle childhood there is a disposition to intervene, which peaks in middle adolescence (e.g. Cummings et al., 1991). Distress, specifically fear, is most evident during the pre-school years (Cummings et al., 1989), whilst sensitivity to resolution increases at age 6 and remains acute throughout childhood (Cummings and colleagues, 1989, 1991). Scant work however, has attempted to explore the cognitive processes in children of different ages, which may underpin the variation in children's emotional and behavioural responses across development. Studies exploring the mediating role of children's appraisals have focused largely on adolescent samples, yet children's cognitive abilities become more sophisticated with age (Piaget, 1970), and thus the meaning that children are able to glean from inter-parental and parent-child interactions, may vary as a function of age. The role of children's appraisals as a mechanism through which children of different ages are adversely affected by marital conflict remains an area for enquiry.

The work reviewed in this chapter indicates that children's adaptive development is inextricably related to the interparental relationship, both directly and indirectly, through marital interaction itself and children's processing of its meaning, and through the effects such interaction has on other aspects of family life, such as parenting. Overall, it can be argued that great strides have been made in moving beyond

the 'first generation' of research, focussed on outcomes, to the second, concerned with process (Fincham, 1998). Focus on the interplay of child, family, and broader contextual factors, in order to disentangle sequelae that may enhance or ameliorate children's experiences of inter-parental conflict is now the norm rather than the exception within this field of research. It also brings into focus, the need for a similar level of understanding to be acquired, with respect to domestic violence and child adjustment.

In turning to consider how the marital conflict literature may be usefully applied to understand child adjustment in the context of domestic violence, it should be clarified that it is not the suggestion that the marital conflict literature serves as an equivalent to the domestic literature, negating the need for further work with samples of children who have been exposed to their parents' violence. What *is* advocated however, is that in seeking to elucidate mechanisms through which inter-parental violence affects children, the marital conflict literature provides a place at which to start; a guide to be used by researchers, to locate and navigate potentially rich avenues of enquiry.

Practical challenges in undertaking research with families experiencing domestic violence

Research undertaken with high risk clinical samples may at the outset, pose significant challenge. Studies that utilise shelter samples are often criticised in that they do not yield results that are generalisable to maritally violent families at large (El-Sheikh et al., 2008). Only a small number of women access formal services, and those who do are documented to have experienced abuse at the extreme end of the distribution of frequency and intensity (Johnson, 1995; Jouriles, McDonald, Norwood & Ezell, 2001). Further, in this setting a sample of significant size may be difficult to assemble. Owing to the sensitive nature of domestic violence, and the wider issues with

which parents and children residing in refuge may be contending, services may be reluctant to allow access to clients. Additionally, UK refuge sites tend to be small, perhaps with only 20 places available to serve a large city, and therefore gaining access to a large enough sample is difficult. The increased risk of child abuse in violent families necessitates that researchers have clear procedures in place, in the case that a child divulges abuse. Researchers are legally obligated to pass on information relating to previously undisclosed abuse (Peled, 2001), and this must be made clear when securing informed consent from parents for both their own, and their child's participation. This may limit the willingness of some high risk participants to take part in a study, resulting in lower participation rates and higher drop out (Rossman & Rea, 2005; Wolfe & McGee, 1994). Further, the maintenance of this sample over time may prove even more challenging (Gondolf & Deemer, 2004). Housing instability often co-varies with domestic violence (Pavao, Alvarez, Baumrind, Induni, & Kimerling, 2007), and families may relocate several times, making them incredibly difficult to track (Gondolf & Deemer, 2004). Further, ethical questions are raised when re-contacting individuals for a second or third wave of data collection, owing to the danger that this may pose to adult victims and their children should this be discovered by a perpetrator, who was previously unaware of the family's participation in a research study (Sullivan & Cain, 2004). Even when efforts are made at the outset of a project to establish that abuse has ceased or an abusive relationship has ended, this status may be relatively fluid, with partners reuniting, and abuse reoccurring (Hilbert & Hilbert, 1984; Martin , Berenson, Griffing, Sage, Bingham, & Primm 2000). These difficulties can be negotiated, as evidenced by the studies which have assembled samples large enough to survey children's adjustment problems (Grych et al., 2000; Jouriles et al., 1998). However, in order to overcome the problems outlined above, large research grants may

be required in order to facilitate enough resource to assemble and track samples of significant size. This in turn may significantly hamper research outputs that help to elucidate the mechanisms through which children may be affected by exposure to inter-parental violence.

One way of ensuring continuing momentum in the field, is to make better use of community sampled data in order to begin to address questions of clinical significance. Studies suggest that between 16-33% of couples engage in significant levels of interpartner aggression (Margolin, John & Foo, 1998; O'Leary et al., 1989). Nationally representative surveys also corroborate these findings. The British Crime Survey (Walby & Allen, 2004) showed that 13% of women, and 9% of men had been subject to at least one incident of domestic abuse, sexual victimisation or stalking in the 12 months prior to the survey. Further, Schafer, Caetano & Clark (1998) found that 20% of married and cohabiting couples in America experience at least one incident of physical partner aggression. These figures suggest that a sample drawn from a community setting may contain a proportion of families, where the inter-parental relationship is marked by high levels of hostility and aggression. Although in many cases, violence may be less frequent and on the whole less severe, than that characterising the experiences of families and children seeking formal assistance (Johnson, 1995), Jouriles et al. (2000) argue that this type of violence represents that to which children are more frequently exposed. Therefore, samples drawn from the community, which isolate those families marked by high rates of hostility and aggression, may yield findings that give insight into the relationship between inter-parental aggression and child adjustment in everyday settings (El-Sheikh et al., 2008). Currently however, much of the research generated to explore the marital conflict–child adjustment association, utilises data collected from families experiencing the broad spectrum of

inter-parental conflict, rather than those families at the extreme of the distribution of behaviours. This approach assumes a linear relationship between conflict and adjustment, where increases in conflict behaviour at one end of the scale affords equal change in the outcome variable as do changes at the opposite pole (Fincham et al, 1994). Yet, in the same way that the argument is made for the discontinuity between conflict and violence, conflict itself may only become a problem when it exceeds a certain threshold (Fincham et al., 1994). Goeke-Morey et al. (2003) identified consistent distinctions in children's emotional, behavioural, and cognitive responding across broad categories of constructive and destructive conflict tactics. Thus it is conceivable, that the dysregulation caused by exposure to destructive conflict may be underpinned by different processes, than problems which arise in the face of lower levels of conflict. This is not to say however, that there is not variation within these categories, according to the severity of inter-parental behaviour. Goeke-Morey et al. (2003) found that this was the case, suggesting that broadly destructive behaviours may be ordered along a continuum according to the distress they evoke in children. Despite this, relatively little is known about the processes underpinning children's development in the context of differing levels of inter-parental conflict. This poses a challenge for generating hypotheses relating to highly hostile families, based on the assumption that aggressive forms of conflict may have more in common with marital violence, than conflict that is marked by low rates of destructive behaviours. With this in mind, it may be possible to utilise community data to begin to generate a better understanding of the mechanisms which communicate the effects of inter-parental violence to children. Use of community data in this way may also provide a benchmark against which to compare findings generated with the use of small clinical samples.

One of the goals of a process oriented approach to study in this area, is to identify multiple causal factors and the way in which they operate over time to explain children's' adjustment. Longitudinal research is identified as critical to this endeavour. The collection of prospective data over multiple time points can enable researchers to show that one variable temporally precedes another, which may give a much better idea of the causal relations between theoretical constructs of interest (Harold, Shelton, Goeke-Morey & Cummings, 2004). Concurrent data on the other hand, can not be used to identify such relations, showing only that variables may covary. A further merit of using a longitudinal design is that it is able to rule out other potential explanations for the pattern of relations between variables of interest. This may be particularly important where relations between inter-parental conflict, children's appraisals, and adjustment are being considered (Grych et al., 2003). Children experiencing higher levels of anxiety may perceive more threat in their environments (Puliafico & Kendall, 2006; Suarez-Morales & Bell, 2006), whereas children experiencing symptoms of depression may be more likely to blame themselves for the occurrence of negative events (Stark, 1990). Therefore, children's symptoms may play a causal role in predicting children's appraisals, rather than vice versa. Grych et al., (2003) also argue that an individual's physical and psychological well being may be affected by trait levels characteristics, where individuals who score high on trait negative affectivity are likely to experience higher levels of distress than others, even in the absence of a stressor (Watson & Pennebaker, 1989). These individuals are suggested to have a more negative view of the self and others, and may be in general more dissatisfied with their lives (Harold & Conger, 1997). These individual differences, along with state level fluctuations in mood may be important in predicting long term individual differences in outcome. The ability

to partial out the effects of symptoms on appraisals takes account of these alternative explanations.

Whilst longitudinal designs have undoubted strengths, they also have practical limitations, that in some cases may prohibit their use. Cummings et al. (2000) note the issue of cost, which is higher per participant for longitudinal data collection, the practicalities of several waves of data collection, the long time lags in between waves and the tracking of participants. As already raised, some of these practical issues may be especially difficult to negotiate in attempting to carry out research with high risk samples such as those experiencing domestic violence. Further, longitudinal work is often regarded as a 'next step', that is undertaken following the establishment of cross sectional relations. Thus, bearing in mind the infancy of process orientated work, with respect to children's exposure to domestic violence, cross sectional research may represent a more appropriate 'first step' in the move towards affording greater understanding of how parents' violent conflict affects children (Grych et al., 2003). Further, in combining cross sectional findings with those yielded from longitudinal studies of community samples as discussed above, significant headway may be made in elucidating links between extreme forms of inter-parental conflict and children adjustment. The studies contained within this thesis provide an example of how community and clinical data, and longitudinal and cross-sectional research designs may be used in concert to begin to address questions of significance to families experiencing domestic violence.

Chapter summary

The review of literature outlined in this chapter highlights the lack of exploration of the mechanisms that account for the link between children's exposure to inter-parental violence and child adjustment, and by way of contrast, draws attention to

the more advanced comprehension of the processes underpinning the marital conflict – child adjustment link. In highlighting commonalties between violent and non violent inter-parental conflict, and more importantly in highlighting the potential commonalties in *children's experiences* of inter-parental conflict and violence, the rationale for the use of the marital conflict literature as a roadmap to guide future research with respect to domestic violence is articulated. Several theoretical perspectives have been outlined here, which seek to explain the way in which inter-parental conflict may have adverse outcomes for children. Principal among these is evidence indicating that parenting, and the quality of parent-child relations, are depleted in the context of problems in the inter-parental relationship. Increased importance has also been given to the role of children's social cognition about marital conflict and family relationships. Children's awareness of conflict and what they infer from such events for their own and their family's welfare appears central to understanding the variation in children's functioning. In addition, the role of emotional security has received empirical support, as a means by which children interpret and respond to conflict, including emotion regulation, cognitive representations and behavioural regulation of the stressful event. In expanding these process models, the family wide model represents an articulation of how direct and indirect pathways can be integrated into a unifying theory of inter-parental conflict, which may give a more comprehensive account of the processes through which inter-parental conflict influences children (Cummings & Davies, 2002). Collectively, this work holds promise for understanding the ways in which more extreme forms of inter-parental conflict may adversely affect children, and serves as a foundation on which to build, and a guide for where to go in order to develop comprehensive process accounts that capture the experiences of children developing in violent households. Finally, consideration was given to some of the challenges of undertaking research with high

risk samples, and the practical problems that may thwart progress towards the goal of applying process oriented logic to the study of domestic violence. The use of larger more accessible community samples, in combination with smaller more difficult to reach clinical samples, is offered as a solution to aid in research that seeks to generate relevant messages relating to child development in the context of hostile and aggressive family contexts.

This thesis draws on this approach to consider in more detail, the integration of direct and indirect pathways, in order to provide account of how several factors may operate together to explain the link between violent inter-parental conflict and child adjustment. Specifically, the main focus of this thesis is on the examination of the interrelationships between children's appraisals of inter-parental conflict and the quality of parent-child relationships, and the joint influence that these appraisals play in linking children's awareness of conflict to their concurrent, and longer term internalising symptoms and externalising problems. Children's internalising problems are operationalised here as children's self reported symptoms of depression, anxiety and social withdrawal, whereas children's externalising problems are indexed using children's and teachers reports of aggressive behaviour in the studies contained within Chapters 2 and 4, and children's and mothers' reports of aggression in Chapter 5.

This thesis is particularly concerned with understanding *if,* and *how,* the pattern of relations between variables varies as a function of the severity of conflict of which children are aware, which begins to address questions of how findings yielded by work focussing on inter-parental conflict, may be drawn upon to guide understanding with relation to family contexts marked by highly hostile and aggressive inter-parental relations. The chapters in this thesis present a series of studies that focus directly, on the interrelationships between the inter-parental and parent-child relationships, and

adjustment outcomes during late childhood and early adolescence, among children living in community and domestically violent households. The data on which these studies are based are drawn from both community and clinical settings and derive from two projects, both funded by the Economic and Social Research Council (R000222569; RES-000-22-1041) and directed by Professor Gordon Harold. The first project involved data collected form a large community sample of parents, children (11-14 years) and teachers across a three year period between 1999 and 2001. The study focussed on the impact of conflict between parents on children's long term symptoms of psychological distress. The second study represented a two cohort study undertaken over two years between 2006 and 2007. This study involved data collection from a large sample of parents, children (9-11 years) and teachers, drawn from a community setting and a small sample of data drawn from mothers and children accessing services for survivors of domestic abuse.

Thesis overview

Chapter 2

This study uses a sample of over 200 parents and children to examine the role of inter-parental conflict and parent-child relationship quality, as intervening links in the relationship between economic pressure and children's behaviour problems. This chapter serves to locate the broader context in which inter-parental conflict may take place, and considers the role of the inter-parental and parent child relationships as key determinants of children's well being in the context of wider sources of family strain. It therefore sets the scene for the remaining chapters contained within this thesis, which seek to explore how children's understanding of these relationships may provide a mechanism, through which violent and non violent marital conflict affects child adjustment.

Chapter 3

This chapter examines in depth, the role of children's social perceptions, as a mediator of the link between children's exposure to stressful events and their adjustment. This chapter draws on the wider social cognitive literature to illustrate how the meaning that children derive from inter-parental conflict and violence may mediate its effect on adjustment. This chapter also provides an account of genetic and biological factors that may provide alternative explanations for children's' adjustment in risky family settings, and considers a theoretical account which argues that these influences may indirectly influence children, through the associated effect on children's emotional and cognitive processes. Finally, the chapter turns to consider specifically, children's appraisals of threat and self blame as determinants of children's adjustment in normative family contexts and provides analysis of the relevance of these particular appraisals to understanding children's experiences of violent inter-parental conflict.

Chapter 4

This chapter contains two interlocking studies. Using a sample of over 315 adolescent children and their teachers, Study 1 considers the role of children's appraisals of threat and blame as determinants of children's appraisals of parent-child relationship quality, and the role that together appraisals of these relationships may play in accounting for children's internalising and externalising problems. The analyses consider the relationship between children's awareness of inter-parental conflict and appraisals over time, whilst controlling for children's initial symptom levels. Analyses are conducted for the complete sample, followed by separate analyses across low and high conflict groups in order to explore the variation in process as a function of the level of conflict severity perceived by children. Using a sample of 173 children and teachers, Study 2 builds on Study 1 by examining the role of children's appraisals of

family relations as a mechanism through which conflict influences the adjustment of a younger group of preadolescent children. The study once again compares processes across low and high conflict groups, in order to determine whether there is continuity, or indeed discontinuity, in identified mechanisms as a function of conflict severity. As in the previous study, the interrelations between theoretical constructs are examined as they unfold over time, whilst controlling for initial symptom levels.

Chapter 5

This study serves to extend the findings of Chapter 4, generated using normative samples, to children and family exposed to non-normative levels of conflict. The study utilises data drawn from both clinical and community settings, where children have been exposed to very high levels of inter-parental conflict and violence. This study explores the concurrent interrelations between children's awareness of non normative levels of conflict, their appraisals of multiple family relationships, and adjustment outcomes, and compares the pattern of associations to those identified amongst a group of children exposed to normative levels of inter-parental conflict.

Chapter 6

This chapter serves to summarise and discuss the findings of the thesis, highlight potential limitations, and examine directions for future research. The results are discussed with respect to the relevance of adopting a process-orientated approach to understanding children's psychological adaptation in the context of, or following exposure to violent inter-parental conflict, and the need for future research to employ this approach with parents and children who have experienced domestic violence. Finally, this chapter explores the implications of the findings discussed throughout this thesis, for policy and practice development.

Chapter 2

<u>Introduction</u>

This chapter considers the wider family and ecological context in which inter-parental conflict and violence may occur and explores the role of the inter-parental and parent-child relationships as key determinants of children's psychological adaptation in the context of broader family strain.

Stressful life experiences constitute a potential threat to the well being and healthy development of children and adolescents (Grant, Compas, Stuhlmacher, Thurm, McMahon & Halpert, 2003), with inter-parental conflict and violence perhaps representing one of the most pervasive and proximal stressors to which children may be exposed (Goodman & Gotlib, 1999). A vast body of work documents the prospective association between hostile and violent inter-parental behaviour and children's increased levels of maladjustment, as indexed by psychological symptoms, behavioural problems, decreased social competence, and impaired academic attainment (Buehler, Anthony, Krishnakumar, Stone, Gerard & Pemberton, 1997; Cummings & Davies, 1994; English et al., 2003; Grych & Fincham, 1990; Kitzmann et al., 2003; Troxel & Matthews, 2004; Wolfe et al., 2003). However, it is important to recognise that marital conflict occurs in a family context and that family factors, such as depression and marital conflict, are affected by the social context in which the family unit is embedded (Bronfenbrenner, 1977). Seeking to understand the broader ecology in which inter-parental conflict occurs may give some insight into its precipitating source, and elucidate mechanisms through which sources of risk, seemingly several times removed from children's primary developmental sphere, may have indirect effects on adjustment through reverberations in family process. Like inter-parental conflict, the aetiology of violent inter-parental behaviour has been

shown to stem from a complex interplay of factors (Dutton & Corvo, 2006). For example, research shows that intimate partner violence is co morbid with substance abuse and mental health problems for both perpetrators and victims (Danielson, Moffit, Caspi & Silva, 1998). Thus, efforts to understand the broad contextual factors that contribute to the occurrence of inter-parental conflict may also be relevant for understanding the aetiology of inter-parental violence.

The Family Stress Model developed by Conger and his colleagues (Conger et al., 1990, Conger, Conger, Matthews & Elder, 1999; Conger, Ge, Elder, Lorenz, & Simons, 1994,) is an exemplary example of a model of child development based on a process-orientated framework (Cummings & Cummings, 1988; Cummings & Davies, 2002). It seeks to explicate children's functioning as a product of multiple factors located both within and outside of the family, and delineates the interrelations between these factors. The model suggests that contextual factors, such as economic pressure, may influence children indirectly through the disruption caused to key family relationships particularly, the inter-parental and parent-child relationships. Specifically, the model explicates how increased economic pressure leads to parents' increased depressive symptoms. These problems are proposed to increase levels of conflict occurring between parents and decrease the amount of warmth characterising spousal interactions, which in turn is proposed to diminish the quality and sensitivity of parenting. Negative parenting is proposed to serve as the primary mechanism through which the effects of inter-parental conflict and broader family dysfunction are communicated to children. Before turning to review empirical work that attests to the validity of this model as a whole, evidence is reviewed in brief, relating to each of the proposed theoretical pathways, with particular attention given over to the links between inter-parental conflict, parenting and child adjustment.
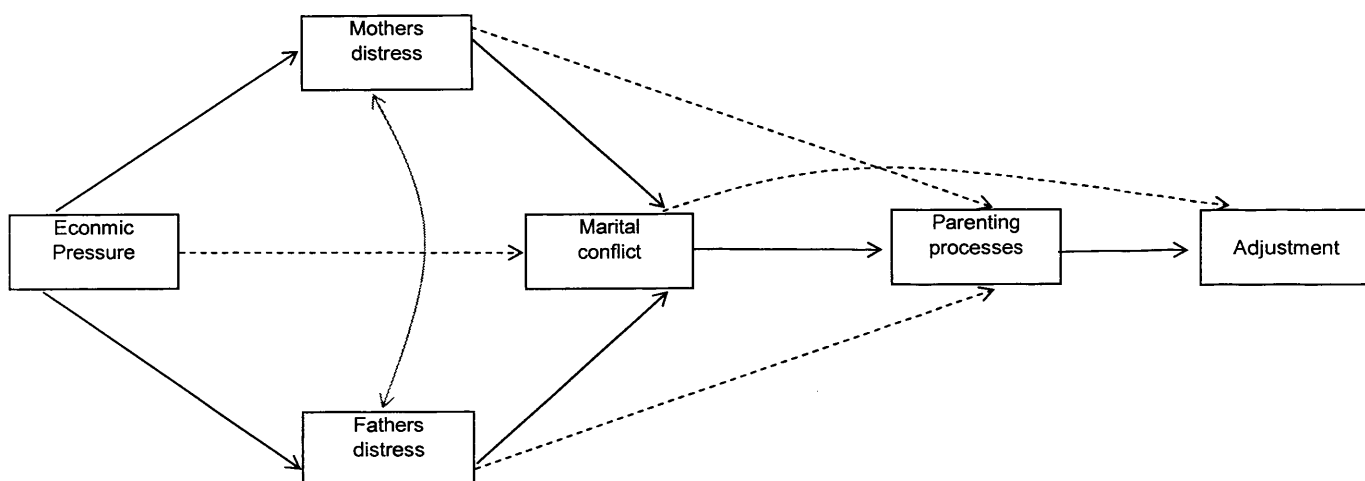
Figure 1. The Family Stress Model

Economic pressure

Much of the research that explores the links between economic hard times and family functioning has been conducted in the midst of economic depressions and recessions of economic cycles, which have affected whole communities (Elder, 1974; Elder, Eccles, Ardelt & Lord, 1995; Conger et al., 1990; Kwon, Rueter, Lee, Koh & Ok, 2003; Leinonen, Solantaus & Punamäki, 2003; Robila & Krishnakumar, 2005), although difficulty in making ends meet may be brought about by conditions specific to an individual family, such as chronic illness and subsequent job loss. Perceived economic pressure may also arise when families are unable to afford non essential added extras (Mistry, Lowe, Benner & Chien, 2008), the perception of which may be heightened by the economic inequalities between families at either end of the class system that characterises many contemporary societies (Dorling et al., 2007; Drukker, Kaplan, Schneiders, Feron & van Os, 2006; Elder et al., 1995).

Low income, job loss, or wide scale economic recession may create difficulties in meeting basic material needs and wants, such as obtaining adequate

food and clothing and paying bills, and may require that families cut back on even necessary expenditure (Conger & Donellan, 2007). As well as the obvious direct consequences of having insufficient funds to afford the basic necessities with which to live, the experience of these kinds of pressures may create a sense of stress and worry, bringing psychological, as well as objective meaning to economic hardship.

Economic pressure, parent depression and inter-parental conflict

Economic pressure may impact directly on rates of inter-parental conflict and violence if couples disagree about family finances (Berry & Williams, 1987; Hobart, 1991; Price, 1992). However, the Family Stress Model proposes that the psychological strain emanating from financial hard times is associated with increased marital conflict, and decreased relationship quality, through the distress experienced by spouses (Conger et al., 1990; Conger et al., 1999; Conger et al., 1994). Research has shown that experience of economic pressure is associated with decreased individual functioning, as evidenced by increased depression (Kwon, et al., 2003; Robila & Krishnakumar, 2005), somatic complaints (Conger, Lorenz, Elder, Simons & Ge, 1993), lack of perceived coping efficacy (Kwon et al. . , 2003) and broad indices of emotional distress (Conger, Rueter & Elder, 1999).

Exposure to stress, such as that associated with economic hardship, is proposed to generate frustration, which may be borne out in the couple relationship as increased levels of anger and depression (Berkowitz, 1989). In particular, increased levels of anger may mean that couples may respond to disagreements in a hostile fashion. Thus, quarrels that might otherwise have been handled effectively may be more likely to culminate in extreme expressions of hostility, including violence, between partners. (Johnson, 1995). Indeed, Frye and Karney (2006) document that husbands' reporting higher levels of chronic stress, were more likely to engage in

physical aggression in general, and were also more likely to engage in physical aggression in response to an acute source of stress. Further, financial problems are found to be prevalent amongst the perpetrators of domestic violence (Robinson, 2003); evidence indicates an association between men's physical aggression towards a partner and unemployment (Anderson, 2002), with the British Crime Survey (Finney, 2005) also indicating an association between higher rates of domestic violence and lower economic status. Thus broad contextual factors, such as economic pressure, external to the spousal relationship, may be important for understanding the ecology of violent as well as non-violent marital conflict.

Many tests of the Family Stress Model have conceptualised emotional distress as depressed mood (Conger, Conger, Elder, Lorenz, Simons & Whitbeck, 1992, Conger et al., 1993; Kwon, et al., 2003; Robila & Krishnakumar, 2005). The association between depression and couple conflict is widely documented (Bruce & Kim, 1992; Crowther, 1985; Whisman, 2001). It is proposed that this association is accounted for by the way in which symptomatic individuals manage their interpersonal exchanges (Coyne, Thompson & Palmer, 2002). Depressive symptoms in one or both spouses related to exchanges that are characterised by increased hostility, tension and discord (Cummings & Davies, 1994; Downey & Coyne, 1990). Husbands' marital interactions seem to be particularly affected by their symptoms of depression. By way of illustration, Papp, Goeke-Morey & Cummings (2007) found that husbands' relationship behaviour was more extensively affected by depression where symptoms were linked to lower positivity, increased expressions of anger and sadness, as well as withdrawal from the relationship. Wives' symptoms were only found to be related to physical symptoms of distress such as crying and dyadic withdrawal. Further, Fincham, Beach, Harold & Osborne, (1997) and Shelton &

Harold, (2008), found that husbands' but not wives' depressive symptoms predicted later increases in marital conflict and dissatisfaction. Fincham et al. (1997) suggest that men may respond to their own depression by denigrating their relationship, or withdrawing from their partner, to a greater extent than do women. Consistent with this, Schmaling & Jacobson (1990) suggest that husbands may serve as the barometer of couple relationship quality, where their mood and symptoms have a more profound effect on the quality and emotional tone of the couple relationship.

Parent depression, marital conflict and parenting

Parent depression in, and of itself, is widely documented to be associated with children's negative outcomes (Cummings & Davies, 1994; Downey & Coyne, 1990), although this relationship is shown to be mediated both by marital distress (Davies, Dumenci & Windle, 1999; DuRocher Shudlich & Cummings, 2003) and diminished parent-child relations (Kane & Garber, 2004; Oyserman, Bybee & Mowbray, 2002). Belsky (1984) suggests that parenting behaviour can be determined as a function of individual parent factors, child characteristics and the social context in which the parent-child relationship exists, with emphasis on the marital relationship as a primary emotional context in which parent-child functioning occurs. The pathways delineated in the Family Stress Model capture this proposal by suggesting that parenting is a product of both proximal (marital conflict), and more distal contextual factors (economic pressure), which are bridged by parents' depressive symptoms.

Inter-parental conflict, parenting and child adjustment

Consistent with the indirect effects model of inter-parental conflict reviewed in Chapter 1 and central to the Family Stress Model is the proposal that disruption to key family relationships conveys the effects of distal and more proximal risks to children. The model suggests that increased inter-parental conflict, brought about as a

result of parents' individual distress, does not impact on children's symptoms directly, but is mediated by diminished parenting practices. This proposal draws on a long and established literature, which indicates that parents' conflict *indirectly* affects children's symptoms of psychological distress by altering the quality of relations children experience with their parents. Several theoretical perspectives offer account of how negative emotion, mood or interactional style engendered in the marital relationship may be transferred to the parent child-relationship (Engfer, 1988; Erel & Burman, 1995), which may in turn inform child adjustment. For example, social learning theory explicates how, through a process of socialisation, children may develop difficulties when presented time over with negative aggressive models (Bandura, 1977). As these types of behaviours tend to be particularly salient in violent and conflicted homes, social learning theory provides an intuitively appealing explanation by which to account for the association of exposure to domestic violence and children's adjustment problems. The main tenet of the theory is that children learn behaviours by watching and imitating those around them. Because of their salience, affective relationship and importance to their children, parents are powerful models, particularly for their same sex offspring (Fincham et al., 1994; Grych and Fincham, 1990). As parents engage in aggressive behaviours, their position as authority figures communicates to children that hostile behaviour is an acceptable means of exchange (Cummings & Davies, 1994). Davis et al. (1998) found that when parents engaged in conflict with one another, adolescent children behaved more aggressively towards their parents, especially towards their mothers (see also Ulman & Straus, 2003).

Patterson (1982) draws on tenets of social learning and socialisation perspectives to describe the development of coercive family process. Here family stressors diminish parents' ability to successfully implement family management

practices, such as the adequate monitoring and disciplining of children, instead relying on hostile and coercive tactics to keep children in line. This in turn provides children with a hostile model of problem solving, increasing the likelihood that they draw on similar strategies in order to achieve their desired goals, manifest as increasingly oppositional and difficult behaviour. A child exhibiting high levels of externalising problems may be less likely to comply with parents' instructions and requests and, as the child continues to escalate misbehaviour, the parent may either escalate their use of hostile tactics or else surrender to their demands, thereby negatively reinforcing the behaviour (Cummings & Davies, 1995; Ge, Brody, Conger, Gibbons & Simons, 2003; Pettit, 1997). Poor monitoring of children and hostile styles of parenting have in turn been linked to increased child adjustment problems (Holden et al. , 1998; Loeber & Dishion, 1984; Margolin et al., 1996; Patterson & Stouthamer-Loeber, 1984). The combination of a child who exhibits high levels of aversive behaviour coupled with parents' ineffectual child management skills creates a family system characterised by coercive, attacking and counterattacking exchanges (Margolin, Oliver & Medina, 2001). Individuals attempting to parent in the context of a hostile couple relationship may be particularly strained and likely to employ coercive tactics to control children's behaviours. Indeed, it is noted that the risk of physical aggression towards children in the context of maritally violent homes is greatly increased (Appel & Holden, 1998), as may be children's propensity to behave violently towards parents (Ulman & Straus, 2003). Children's externalsing problems may also play out in other family systems, for example children's dysregulated behaviour has been shown to impact over time on the level of conflict between parents (Schermerhorn, Cummings, DeCarlo & Davies, 2007), and parent-child conflict has been shown to increase sibling conflict (Noller, Feeney, Sheehan & Peterson, 2000). This indicates how the family environment as a

whole may become characterised by hostile and coercive interactions among family members.

Attachment theorists take a different perspective in explicating how parenting and parent behaviour may impact on children, with a much greater focus given over to the *emotional* bonds that develop between parents and children (Bowlby, 1969). The quality of attachment is proposed to be largely a function of the sensitivity with which parents respond to children, although it is noted that children's individual differences may also influence parents' responsiveness (Ainsworth, Bell & Stanton, 1971; Ainsworth, Blehar, Waters & Wall, 1978; Ainsworth & Wittig, 1969; Karavasilis, Doyle & Markiewicz, 2003). Findings which show that parents embroiled in conflicted and violent marital relationships are less aware of, and less sensitive to, their children's needs (e.g. Katz & Gottman, 1996; Levendosky & Graham-Bermann, 2000; Sturge-Appel et al. , 2006), which suggests that the emotional bond between parent and child may be particularly vulnerable in the face of this source of family stress.

Research studying infant samples has found links between inter-parental conflict, and children's attachment security in the parent-child relationship. Owen and Cox (1997) found that parents' conflict was related to an increase in disorganised attachment behaviour (characterised by the absence of a coherent attachment style) with both mothers and fathers, and that sensitive parenting did not ameliorate this relationship. That sensitive parenting did not attenuate the link between inter-parental conflict and attachment suggests that there may be something about exposure to conflict itself that may undermine children's emotional ties to a caregiver (Davies & Cummings, 1994). Davies, Winter & Cicchetti (2006) and Owen & Cox (1997) make the case that parents' conflict behaviour presents the child with a paradox whereby the

attachment figure is both the source and solution to the child's alarm and fear. Unresolved family conflict and other evidence of adults' limitations may diminish a child's confidence in a caregiver's power or availability to provide support in difficult situations. Children's experience of domestic violence may be particularly disruptive to the attachment relationship based on the fact that parents' frightened and frightening behaviours (Owen & Cox, 1997) may dramatically undermine children's belief in parents as a source of security and protection (Davies et al. , 2006). Moreover, recent studies have shown that the joint influence of hostile family conflict, and poor parenting practices increase children's vulnerability to maladaptation by undermining children's security with respect to both the inter-parental and parent child relationships (e.g. Harold, Shelton, Goeke-Morey & Cummings, 2004).

Systems theory conceptualises the family as a hierarchical structure in which there exists subsystems, including the marital, parent-child and sibling relationships, which are themselves embedded in larger systems (Cox & Payley, 1997). Whereas attachment based perspectives have tended to highlight the importance of the mother-child relationship, a systems based analysis of the family emphasises the significance of multiple relationships in determining children's adjustment. This has promoted the development of models, the Family Stress Model being a prime example, which highlight the linkages between *multiple* family subsystems, the wider context in which the family is embedded and the process through which these factors operate to influence levels of child maladjustment (e.g. Conger et al. , 1992, 1993, Conger et al. , 2002). A focus on the broader family environment in which couple conflict occurs has lead to the consideration of triadic interactions between family members, in recognition that parenting behaviour may change in the presence of a spouse (e.g. Deal, Hagan, Bass, Hetherington & Clingempeel, 1999; Holden & Ritchie, 1991). In

particular, the quality of interaction between both parents and their child may be diminished in the context of conflict (Kitzmann, 2000), with parents engaged in conflict becoming more competitive and critical of one another, and thus, less able to support one another in parenting tasks (Katz & Low, 2004; Margolin et al. , 2001).

Family systems theory has also drawn attention to the importance of the boundaries that define and separate various subsystems within the family (Combrinck-Graham, 1989). The interaction between family members is suggested to be in part governed by these boundaries (Minuchin, 1974), which represent a set of implicit rules that regulate the level of intimacy and contact between family members, and which communicate to individuals the way in which they should function in the context of their relationships with one another. Under stress however, these boundaries may become less defined and more permeable. In the face of couple conflict or violence, boundaries between the marital and parent–child subsystems may be particularly vulnerable (Cox et al., 2001). For instance, disruptions to the co-parenting relationship may promote one parent's attempts to form an alliance with their child by undermining or badmouthing the parenting efforts of their spouse (Grych, Raynor & Fosco, 2004). This may have a detrimental impact, not only on the relationship with the parent against whom the child is expected to turn, but also with the parent with whom the child is expected to align (Cox et al., 2001); a child may feel anger or resentment against a parent for expecting him/her to 'choose sides'. A further representation of boundary breakdown is the 'parentification' of a child, a term coined to describe when a child is allowed to take on a parent type role and is obligated to bear parenting responsibilities in an inappropriate fashion (Jacobvitz, Hazan, Curran & Hitchens, 2004; Jurkovic, Jessee & Goglia, 1991). This role reversal has been documented in relation to parental separation (Wallerstein, 1985; Jurkovic,

Thirkield & Morrell, 2001) and child maltreatment (Crittenden & Ainsworth, 1989; Crittenden & DiLalla, 1988; Macife, Toth, Rogosch, Robinson, Emde & Cicchetti, 1999), and qualitative evidence suggests that this may occur with some frequency in families experiencing domestic violence (e.g. Mullender et al. ., 2002). Parents who are injured as a result of an attack or who are too overwhelmed with their situation may require, either explicitly or implicitly, that older children care for their younger siblings, take on responsibility for household duties and provide emotional support. This inappropriate burden of care may be overwhelming for a child, leading to anxiety and depression, or alternatively, it may evoke feelings of resentment towards a parent who expects the child to step up to family responsibility.

While family studies highlight the potential for coercive family processes to influence parent and child behaviour, genetic effects have been found to influence child adjustment problems, including aggression and hostility. Specifically, because the factors that result in disruptions to inter-parental and parent-child relations are closely related to heritable parental characteristics, it is possible that rather than family process variables constituting true environmental risk for children, such effects actually reflect intergenerational genetic liability shared by parents and children (Rutter, 1994; Silberg & Eaves, 2004). This said, research using genetically sensitive research designs, which have examined the relationship between couple conflict and divorce and child and adolescent adjustment, has provided evidence for environmental mediation of effects over and above genetic effects on these behaviours (D'Onoffrio et al. ., 2005; 2006; O'Connor, Caspi, DeFries & Plomin, 2000). The long-term effects of parenting behaviour on child adjustment have also been shown to include an environmentally mediated component (Burt, McGue, Krueger & Iacono, 2005; O'Connor, Deater-Deckard, Fulker, Rutter & Plomin, 1998). Finally, the relationship

between adolescent appraisals (cognitions) about parent-child relationship quality and parenting behaviour and their adjustment problems has also been found to be partly accounted for by environmentally mediated effects (Shelton et al., 2007; Caspi et al., 2004; Pike, Reiss, Hetherington & Plomin, 1996; Burt, McGue, Iacono & Krueger, 2006). Collectively, research has shown environmentally mediated links between inter-parental relations, parenting behaviour and child adjustment problems. However, genetically sensitive research that captures the complexity of mediated effects, underlying links between inter-parental conflict and child adjustment (e.g. parenting behaviour, child cognitions about family relationships) remains in prospect only.

These perspectives give account of some of the specific mechanisms through which inter-parental conflict may exert indirect effects on children through parenting processes. It is through this mechanism, the Family Stress Model proposes, that children are largely affected by contextual risk factors such as economic pressure.

Tests of the Family Stress Model

The first full tests of the Family Stress Model involved intact rural families experiencing the agricultural crisis that occurred in Midwestern America in the 1980's. The model was tested separately for its relevance to the development of early adolescent boys and girls (Conger et al. , 1992, 1993). These studies found economic pressure to be linked to parents' depressed mood, which in turn was associated with increased inter-parental conflict. In both cases inter-parental conflict was linked with an index of children's broad adjustment problems through decreased quality of parent-child relations. Crucially, neither model found parents' depressed mood or inter-parental conflict to be related directly to children's functioning. Instead, parenting was the only construct to be directly related to children's adjustment, providing substantial support for the model's central proposition, that parent-child relations and parenting

practices serve as the most proximal mechanism through which the economic position of the family affects the development of children (Conger & Donellan, 2007). This pattern of relations has also been replicated in longitudinal tests of the model (e.g. Conger et al., 1994).

Importantly, tests of the Family Stress Model or specific components of the model, amongst racially and culturally diverse samples have yielded results remarkably consistent with these findings (e.g. Kwon et al., 2005; Robila & Krishnakumar, 2005; Conger et al., 1999). Tests of the model amongst other family constellations also tender consistent findings. For example, in a study utilising a sample where two thirds of care giving dyads comprised a step parent or an individual with whom the primary caregiver was not romantically involved (e.g. aunt), Conger et al. (2002) found that economic pressure increased both primary and secondary caregivers' depressed mood. Both caregivers' depressed mood increased relationship conflict and decreased relationship warmth, which in turn influenced parenting. Again parenting provided the only route through which the effects of economic pressure and the ensuing family disruption operated to affect children's positive and negative adjustment. In tests amongst single parent families, models omitting inter-adult relationship dysfunction have similarly found that disrupted parenting serves as the primary mechanism through which family economic fortunes influence children (Gutman & Eccles, 1999; Mistry, Lowe, Benner & Chein, 2008; Mistry, Vandewater, Huston & McLoyd, 2002).

Understanding the causes and consequences of inter-parental violence

Whilst this work has tended to conceptualise disrupted inter-parental relations in terms of increased conflict and decreased satisfaction, the Family Stress Model may also be important for understanding the broader ecological context in which inter-

parental violence occurs (Hughes, Humphrey & Weaver, 2005). Mentioned earlier, the aetiology of marital violence is shown to stem from a complex interplay of factors (Dutton & Corvo, 2006), with research indicating that intimate partner violence is co morbid with substance abuse and mental health problems for both perpetrators and victims (Danielson et al., 1998). Further, increased economic hardship is shown to be associated with increased rates of intimate partner violence. Chronic stress is shown to increase rates of violence (Frye & Karney, 2006) and it may be that in line with the Family Stress Model, irritability and depression in the face of stressful circumstances lead to the increased expression of anger towards a partner (Berkowitz, 1989). However, it should be noted that this may better represent an explanation of violence that arises as a result of disagreement that gets 'out of hand', whereas some authors suggest that escalated forms of violence may be underpinned by the desire to control a partner (Bograd, 1988; McCloskey, 2001), which several authors suggest should be considered as distinct from 'common couple violence' (Johnson, 1995; Jouriles, Norwood et al.., 2001). Notwithstanding, even less severe inter-parental violence is found to be associated with high rates of extremely hostile parenting (e.g. Appel & Holden, 1998), and also with lower parental involvement with children (e.g. Holden & Ritchie, 1991). Therefore, diminished parenting behaviour and poor quality parent-child relations may provide a mechanism through which the effects of inter-parental violence itself, and the broader risk factors with which it is co morbid, are communicated to children. Therefore, the delineation of the disrupted family processes that may be set in motion by family strain may be just as relevant to considering children's adaptation in the context of inter-parental violence as inter-parental conflict. Additionally, domestic violence is recognised as a primary contributing factor to economic strain amongst parents and children. Fleeing from a

violent relationship may contribute to housing instability (Pavao et al. , 2007) and precipitate a drop in family income, both of which may play a significant part in families slipping below the poverty line (Forrestal, Riviello, Fracchia, 2004). Evidence presented earlier indicates that the model applies equally well to single parent and 'other' family types (Conger et al. , 2002; Mistry et al. , 2008) and thus, through the process proposed by Conger and colleagues, children's psychological functioning may continue to be affected, even after the violence has ceased, as parents struggle to parent effectively in the face of economic strain. Nevertheless, the relevance of this model to understanding both the ecology of domestic violence and children's adaptation in the context of violent families is yet to be directly explored.

Overall, the Family Stress Model provides a theoretically grounded and empirically validated account of one process through which broad contextual factors, such as economic pressure, may influence children's psychological adaptationthrough decreased parent well being, increased inter-parental conflict and diminished parent-child relations. This model seems to have intuitive relevance to understanding the broader context in which intimate partner violence may occur and the mechanism through which it may affect children's well being. Further, support for the Family Stress Model's proposals is garnered across race, culture and family type (e.g. Conger et al. , 2002; Mistry et al. , 2008; Solatus et al. , 2004). Nevertheless, lacking from this impressive body of work are tests of the Family Stress Model amongst a British sample of families. The study to be introduced next serves to address this gap in the literature by attempting to replicate the findings reviewed here using a sample of Welsh children and families.

Economic strain and children's psychological adaptation in Wales

Wales provides a particularly informative setting in which to study economic pressures on families. First, Wales is relatively economically disadvantaged compared to other regions of the UK. Indeed, the industrial and physical infrastructure in Wales has changed dramatically during the last two decades of the twentieth century. Although benefiting from so called "new industries" (e.g., electronics; automotive manufacturing; call centre services), following the demise of the coal and steel industries, Wales still falls behind other regions of the UK in terms of key indicators such as gross domestic product (GDP; Wales = 79 % of UK in 2002) and average gross weekly household income (Wales = 80% of UK in 2002).

Second, many regions across Wales are experiencing significant economic and employment related strain while others are experiencing economic growth and prosperity. Mid-Wales has suffered acutely from the BSE and recent foot-and-mouth crises, not only in terms of agriculture and related productivity (milk and other dairy goods), but also in terms of tourism and service industry. South Wales has, perhaps, suffered to a greater extent than other regions of Wales in terms of chronic economic strain. Following the demise of the coal industry during the latter part of the last century, the region has experienced the continued demise of a primary source of employment – steel. Employment in this arena has shifted from an estimated 64,000 in 1972 to approximately 8,000 in 2002. Indeed, areas such as Port Talbot, Llanwern and Ebbw Vale have seen such dramatic increases in unemployment and redundancy; the effects may prove locally ruinous (Welsh Economic Review, 2002).

In contrast to this generally gloomy picture, Cardiff, Newport and the Vale of Glamorgan are relatively prosperous, with house prices in parts of Cardiff and the Vale equivalent to southeast England. Nevertheless, there is significant variation in

economic fortune within these regions. For example, deprivation scores calculated for each ward of the capital city, Cardiff, show that whilst 31% of wards fell into the least deprived quintile of the UK, 41% of wards fell into the most deprived category (National Public Health Service for Wales, 2006). Thus, in certain areas of South East Wales, families not only have to contend with the daily challenges of continued economic decline and general economic pressure, they also have to cope with their circumstances in the knowledge that other communities appear relatively prosperous. As noted earlier, comparative economic circumstance may serve as an added index of economic pressure among individuals living within these communities (Drukker et al., 2006).

The proposed study provides an important test of the generality of the economic pressure model (Conger et al., 1990). As citizens of a European social democracy, Welsh families are provided with social service and health care that exceed those available to the US citizens studied by Conger, Elder and their colleagues. Thus, the proposed study will provide further evidence about the contribution of psychological processes to the effects of economic hardship, even in a country where there are established levels of social provision.

Consideration of the mediating role of parent-child communication

Finally, whilst previous tests of the theoretical model have focussed on the parenting dimensions of warmth and hostility, the present study assessed an alternative dimension of parent-child relationship quality, parent-child communication .This may be particularly important for understanding the aetiology of children's externalising problems which may be particularly diminished in the context of hostile family environments. Inter-parental conflict may decrease the frequency with which parents interact and communicate with children, or at least it may evoke children's

belief that this is the case. Parents' inability or lack of willingness to communicate with children in a fair and consistent manner may leave children feeling thwarted and frustrated, particularly if they have explicitly engaged with parents in order to foster a sense of closeness in the context of hostile inter-parental relations. Heightened levels of frustration may in turn lead to children's outbursts of anger (Berkowitz, 1989). Second, the amount and depth of knowledge that parents have in relation to their children's whereabouts and activities has been shown to be a key variable in understanding the development and prevention of children's antisocial behaviour (see Stattin & Kerr, 2000 for a review). The amount of knowledge that parents have in relation to their children's activities is thought to be largely obtained through children's spontaneous disclosure of information (e.g. Stattin & Kerr, 2000). Crucial to this exchange of information, is likely to be the quality of parent-child communication; parents are most likely to be privy to information about their children's lives outside of the home when parents and children have a good rapport and communication is marked by acceptance and respect. Poor communication between parents and children in turn may make it less likely that children furnish their parents with the type of knowledge, which makes it possible to keep track of behaviour outside of the home (Crouter & Head, 2002). Both the level of children's disclosure and broad patterns of communication between parents and children have been linked with delinquent and antisocial behaviour (Cernkovich & Giordanno, 1987; Cohen & Rice, 1995; Otten, Harakeh, Vermulst, Van den Eijnden & Engels, 2007; Otto & Atkinson, 1997, Stattin & Kerr, 2000).

The present study

The present study assessed the impact of economic pressure on children's behaviour problems among a sample of over 200 children, parents and their teachers

living in Wales. Based on previous work, the theoretical model presented in Figure 1 proposes that inter-parental conflict and lower parent-child relationship quality mediate the links between economic pressure and parents' psychological symptoms. These proposals are examined in this chapter using both cross sectional and longitudinal data.

The model was tested in a number of stages. First, the role of inter-parental conflict was examined as a mechanism through which economic pressure may be related to children's behaviour problems. Based on previous work which has found economic pressure and children's adjustment not to be directly associated (Conger et al., 1992, 1993), it was hypothesised that inter-parental conflict would serve to link economic pressure to children's concurrent and later externalising problems. Second, on addition of parents' depressive symptoms to the model it was expected, as in other tests of the Family Stress Model (Conger et al. , 1992, 1993, 1994, 1999), that mothers' and fathers' depressed mood would mediate the association between economic pressure and inter-parental conflict, and that inter-parental conflict would exert effects on child adjustment. Based on the corpus of research reviewed earlier and previous findings highlighting parenting processes as the primary mechanism through which contextual factors may affect children (Conger et al. , 1992, 1993, 1994, 2002), it was hypothesised that lower quality parent child communication would fully account for the link between inter-parental conflict and children's concurrent and later symptoms. As an additional step in the longitudinal analyses, the effect of children's initial symptom levels on all theoretical variables was controlled for. In line with Patterson's (1982) coercive family process model it was expected that children's behaviour problems would be associated with parent depression, inter-parental conflict and the quality of parent-child relations.
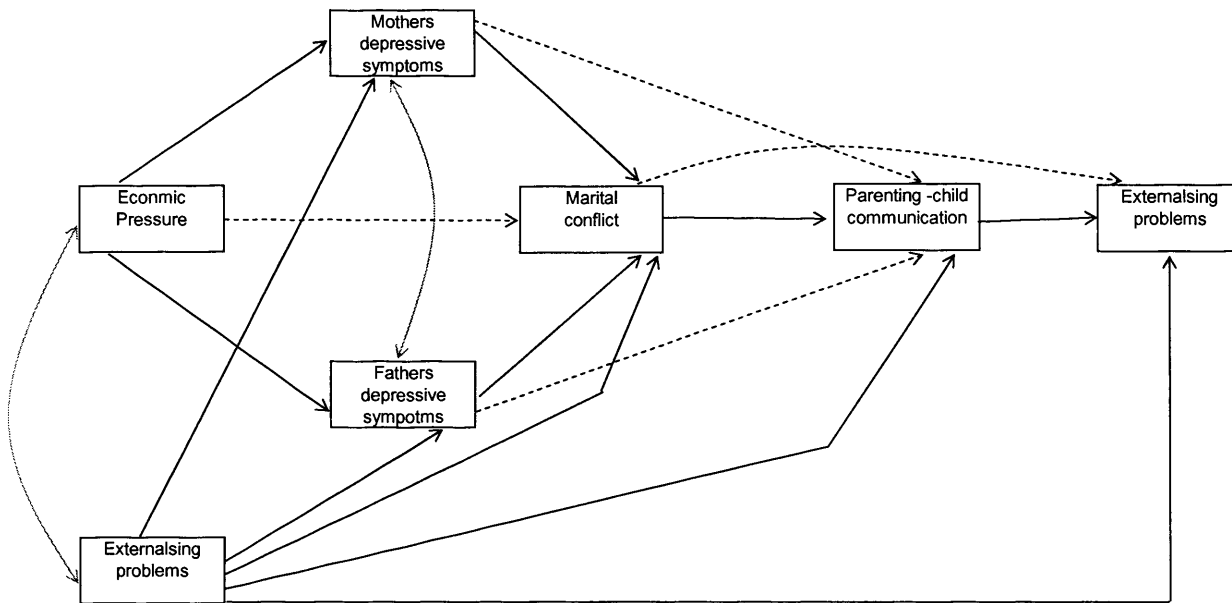
Figure 2. Theoretical model of the relationship between economic pressure, mothers'
and fathers' depression, parent-child relationship quality and children's externalising
behaviour.

Method

Sample

The data for these analyses derive from a larger longitudinal study of more
than 500 parents, children and their teachers living in South Wales in the UK,
conducted between 1999 and 2001. This study focussed on children's and parents
experiences of family life and children's emotional, behavioural and social
adjustment.

Families were recruited to the study through children's schools. Schools were
selected for inclusion in the study by virtue of the economic and social conditions
associated with their 'catchment' area. A school catchment area denotes a particular

geographic region from which children must attend one of a prescribed list of schools. Demographic information relating to particular school catchment areas was derived using postal code location (Office of National Statistics-UK), allowing for the comparison of school areas with national statistics across a number of demographic indices. A total of nine secondary schools took part in the study, two of which were Welsh medium schools. Information derived from the present study suggests that the overall sample is representative of British families living in England and Wales with respect to family constitution, parent education and ethnic representation (Social Trends, 2002).

Of the children participating in the study, 389 parents successfully completed and returned questionnaires during the first year (72% parental response rate). Of those families who completed questionnaires at Time 1, 82% also completed information and Time 2 and of these 70% of families provided information at the last wave of data collection. Preliminary analyses indicated that the families who completed measures at all points did not differ significantly from families who participated in the first year only or the first and second years of the study across any of the primary measures.

Due to sample attrition over the three years of study, longitudinal analyses were carried out using a somewhat smaller sample than was available to run within time analyses. The sample (Sample 1) available for cross sectional analyses totalled 270 cases, whereas, the combined sample (Sample 2) of children, parents and teachers who provided complete information at all three time points and who were considered for longitudinal analyses equalled 214 cases. Children were aged between 11 – 12 years in the first year of study. Sample 1 was comprised of 53% girls and 47% boys

($\underline{M}$ =11.7 years, SD=.48) and Sample 2 was comprised of 53% girls and 47% of boys ($\underline{M}$ = 11.7, SD=.48).

Given the nature of the study questions, only information pertaining to two parent families was included in the analyses. Families were comprised of a female and male guardian and at least one of these adults was the child's biological parent. The samples were comprised in large part of families containing both biological parents (Sample 1: 91.1%; Sample 2: 92.1); 7.1% (Sample 2: 6.1%) of families comprised mother and stepfather and 1.1% (Sample 2: 1.9%) of families were father and stepmother combinations. With respect to ethnicity, both samples were nearly entirely comprised of White British families (Sample 1: 99.5%; Sample 2: 99.5%), and across each of the samples, 92% of children reported that they had siblings. Analyses showed that the respective samples did not differ from one another across either demographic variables or the variables of interest considered in these analyses.

Procedure

After receiving permission from area schools to conduct the study, parents were contacted by letter inviting them to participate in a research project focusing on the link between family life and children's psychological well-being. Parents were also further informed about the study at a parent-teacher evening at which they were given a second letter explaining in more depth, the aims and stages of the project, along with a consent form. No payment was made to families but parents were informed that a summary booklet outlining key findings of the study would be distributed on completion of the study. Parents were required to provide full written consent for their son or daughter to take part in the study. They were informed that data collection would take place on three occasions. Prior to each data collection visit to schools parents received a note through the school mailing system to remind them

of the research team's planned visit. Both children and teachers completed questionnaires during the course of a normal school day. A member of the research team explained the aims and objectives of the data collection exercise and reminded children that they were free to withdraw from the study at any time. The researcher also explained the confidential nature of children's responses and explained that questionnaires would not be identifiable by name. Children sat apart from one another in order to complete their questionnaires and a member of the research team was on hand at all times to assist with children's queries. Upon completion of questionnaires a debriefing session took place where the aims and objectives of the study were reiterated and children were given the opportunity to raise any concerns they might have had. Parents received their questionnaires through the post, along with instructions for completion and a stamped addressed envelope for their return. Parent questionnaires contained a range of measures relating to the quality of family interaction, parenting, marital satisfaction, parent and child psychological health, family economics and family demographics.

Measures

Economic pressure

Each parent responded to four questions relating to their perceptions of economic pressure. These were taken from the Iowa Youth and Families Project Rating Scales (Melby et al. , 1993). One item required parents to rate their present standard of living relative to that of 12 months ago, with responses ranging from 'much higher' to 'much lower'. Two questions related to the difficulty in making ends meet. Each spouse reported on the difficulty associated with paying bills where response options ranged from 'a great deal of difficulty' to 'no difficulty'. A further question related to whether there was money left over at the end of the month. Finally,

parents rated their agreement with the statement 'our income never seems to catch up with our expenses'. Each parent's responses were summed to create a measure of economic pressure. The high correlation between mother and father reports (Sample 1: r= .70; Sample 2: r = .70) allowed scores to be added together in order to create a combined measure of economic pressure (Sample 1: α=.86; Sample 2: α=.87). Items were scored such that a high score reflected greater economic pressure

Parent depressive symptoms

Mothers and fathers completed the Beck Depression Inventory (Beck & Beamesderfer, 1974), a 21 item scale developed to assess the behavioural manifestations of depression. This measure is a widely cited and reliable index of depressive symptoms in community samples (Fincham et al., 1997). Each item consists of several self evaluative statements reflecting differing levels of depression and is rated on a four point scale ranging from 0-3. Items were scored so that a higher score reflected higher levels of depressive symptoms. Husband and wife estimates of internal consistency were high across both reporters and Samples (Sample 1: husbands α=.83, wives α=.84; Sample 2: husbands α=.84, wives α=.84).

Parent report of marital conflict

Mothers and fathers completed three measures of marital functioning and discord. Inter-parental conflict occurring in front of the child was measured using the O'Leary-Porter Scale (Porter & O'Leary, 1980). The scale is comprised of eight items. Items include: 'How often do you complain to your spouse/partner about his/her behaviour in front of your child?' and 'How often do you and your spouse/partner display verbal hostility in front of this child?'. Responses range from 1(*never*) to 5 (*very often*). Both husband and wife estimates of internal consistency for this scale were good (Sample 1: husbands α = .84, wife α = .81; Sample 2: husbands α

= .83, wives α = .80). The second measure of marital hostility was derived from a subset of ten items contained in the Iowa Youth and Families Project Rating Scales (Melby et al. , 1993). This scale focuses on marital conflict that is high in hostility and low in warmth and is measured by information received from both spouses. For the purpose of these analyses, only those questions pertaining to marital hostility were used. The measure includes items such as 'During the past month, how often has your spouse gotten angry at you?', 'Shouted at you because he/she was angry at you?' and 'Argued with you whenever you disagreed about something?'. Possible responses to these items range from 1 (always) to 7(never). Responses were scored so that a high score reflected high levels of spousal hostility. Estimates of internal consistency were high across husbands and wives (Sample 1: husbands α = .89, wives α = .88; Sample 2: husbands α = .87, wives α = .88). The third measure of marital discord used was the Short Marital Adjustment Test (SMAT; Locke-Wallace, 1959), which assesses overall marital adjustment and consensus and has excellent reliability and descriminant validity (Grych et al. , 2003). The measure comprises 14 items and was created to tap more subtle expressions of conflict that may not be evident when using measures of overt hostility (Grych et al. , 2003). Parent responses were coded so that higher scores reflected greater inter-parental distress. Both husband and wife estimates of reliability were good for this scale (Sample 1: husbands α = .80, wives α = .80; Sample 2: husbands α = .79, wives α = .80). Husbands' and wives' responses were summed across the respective measures to represent composite estimates of parent's overt discord; marital dissatisfaction and hostility. Scores across the respective three measures were summed to provide an overall index of marital conflict with higher scores representing higher levels of conflict (Sample 1 α=.83; Sample 2 α=.83).

Owing to the different response scales used by each measure, each scale was standardised at the item level.

Parent-child communication

This construct consisted of both parent and child reports of the quality of parent-child communication. Parents' reports were assessed using the communication subscale contained in the Iowa Youth and Families Project Rating Scales (Melby et al. , 1993). This subscale consists of 9 items and assesses the degree to which the parents and child communicate effectively in order to solve problems (i.e. when you and this child have a problem how often can the two of you figure out how to deal with it?) and how effectively parents explain important decisions to children (i.e. how often do you give reasons to this child for your decisions?). Possible responses range along a 7 point scale from always to never. Internal consistency estimates were good across each Sample (Sample 1: father α = .82, mother α = .80; Sample 2: father α = .88, mother α = .87). Scores were coded so that high scores reflected more negative styles of communication. Scores were summed so as to create a parent report of parent-child relationship quality. No one measure surveying children's reports of parent-child functioning assessed explicitly, the quality of parent-child communication. Therefore, 15 items from various scales were selected. Two questions were selected from the hostility/coercion sub-scale of the Iowa Youth and Families Project Rating Scales (Melby et al. , 1993), including, 'How often in the past month has mum/dad got into an argument with you?. Responses were rated on a 7 point scale ranging from always to never. Eight items were selected from the Children's Perceptions of Parent-child Conflict Scale (Harold, 1997), including, 'When my mum/dad and I argue she/he won't listen to anything I say'. Children responded using a five point scale where answers could be rated as 'strongly agree' through to 'strongly disagree'. Finally five

items were selected from the revised Child Report of Parental Behaviour Inventory (CRPBI; Margolies & Weintraub, 1977), where children are required to rate their agreement with a series of statements using a three point response scale (true, sort of true, not true). A sample statement included 'Always listens to my ideas and opinions'. Children reported on both mother and father behaviour. Items were recoded in order that a higher score represented a more negative style of communication and standardised at the item level. Children's reports of mother and father behaviour were summed to create an overall index of children's appraisal of the quality of communication between parents and themselves, with a higher score indicating a more negative style of communication (Sample 1 α =.88 ; Sample 2 α = .91). Parent and child reports were combined to produce an overall index of the quality of parent-child relations (Sample 1 α=.86; Sample 2 α= .91) and were coded such that a higher score reflected a more negative style of communication.

Adolescent Externalising problems

This measure incorporated both adolescent and teacher reports of externalising behaviour. Children completed the aggression subscale of the CBCL (Achenbach, 1991a) and Buss and Durkee's (1957) trait hostility measure of antisocial behaviour. Both measures obtained good estimates of internal consistency across both time points (CBCL: Time 1, α=.81-84; Time 2, α=.85; Trait hostility: Time 1, α=.82-.86; Time 2, α=.83). Teachers completed the Aggression subscale of the Teacher Report Form of the CBCL (Achenbach, 1991; Time 1, α=.93; Time 2, α=.94). All three measures were standardised at the item level and combined in order to give an overall estimate of externalising problems (Time 1:α=.89-93; Time2:α=.90). In the case of longitudinal analyses, the distribution of this variable at

Time 1 and Time 2 was found to violate assumptions of normality, and therefore in both instances the variable was square root transformed.

Results

Stages of analysis

For the purpose of this chapter, analyses were conducted in three stages. First, the theoretical model (Figure 2) was tested using cross sectional data, collected at Time 1 (1999), to examine the extent to which these data replicated prior studies. This was followed by longitudinal analysis of the proposed model, in order to examine the consistency of results across time. Finally, the theoretical model was tested whilst controlling for children's behaviour problems assessed at Time 1. Paths between symptoms and all theoretical variables were included. In order to maximise the sample size available for each set of analyses there was slight variation across cross sectional and longitudinal analyses, with 270 cases being available for cross sectional analysis and 214 cases with complete data across all measures of interest available for longitudinal analyses.

Correlational analysis

Table 1 reports the correlations between all theoretical constructs used in both cross sectional and longitudinal tests. Results relating to cross sectional analyses are presented below the diagonal. It can be seen that economic pressure was not significantly correlated with concurrent levels of adolescent aggression, although this measure was associated with mother and father depression, both of which were in turn associated with increased levels of marital conflict. In addition, mothers' and fathers' symptoms were positively associated with decreased quality of parent-child communication, although this association was marginal in the case of mothers' depressive symptoms. As expected, there were significant associations between

marital conflict and parent-child communication; and parent-child relations and child adjustment.

Results relating to longitudinal analyses are presented above the diagonal. It can be seen that economic pressure was associated with mothers' depressive symptoms and was marginally related to fathers' depressive symptoms. In line with hypothesised relations, significant links were observed between both parents' depression and inter-parental conflict; inter-parental conflict and parent child communication and parent child relations and adolescent externalising behaviour. Further, in line with hypothesised child effects, children's externalising symptoms at Time 1 were marginally related to inter-parental conflict one year later and strongly related to parent- child relationship quality.

Table 1.

Intercorrelations means and standard deviations for all theoretical constructs used in cross-sectional analyses (N=270) and longitudinal analyses (N=214)

Variable	1	2	3	4	5	6	7	Mean	SD.
1.Economic Pressure	-	.24**	11[a]	.13[a]	.04	.02	.04	19.23	5.35
2. Mother depression	.33**	-	.31**	.25**	.16*	.00	.09	6.98	5.03
3. Father depression	.16**	.26**	-	.30**	.12[a]	.01	-.06	6.20	5.02
4. Marital conflict	.21**	.32**	.36**	-	.37**	.13[a]	.11[a]	0.00	30.90
5. Parent-child communication	-.01	.11[a]	.13*	.17**	-	.30**	.40**	0.00	21.56
6. Externalising T1	.04	.07	.05	.12*	.40**	-	.60**	6.89	1.60
7. Externalising T2	-	-	-	-	-	-	-	6.90	1.55
Mean	19.61	7.20	6.01	0.00	0.00	0.00	-	-	
SD.	5.34	5.16	4.70	22.51	16.84	25.31	-	-	-

Note: Data pertaining to cross sectional analyses are presented below the diagonal and that pertaining to longitudinal analyses are presented above the diagonal.

*p<.05. **p<.01 [a]p<.10.

Regression analysis

Multiple regression procedures were used to test the validity of the proposed theoretical model. As outlined at the beginning of this section, the model was tested in a number of theoretically nested steps. First, the role of inter-parental conflict was assessed in relation to the link between economic pressure and adolescent externalising behaviour. Second, mother and father depressive symptoms were assessed in explaining the relationship between economic pressure and parent reports of later marital conflict. The third step represents a test of the full theoretical model, where the role of diminished parent-child communication was assessed in communicating the effects of earlier economic pressure and the associated disruption in parent mood and increased marital conflict to children's externalising problems. In the case of the longitudinal analysis, a fourth step was included where children's earlier levels of adjustment were included in the model.

Cross sectional findings

The initial correlation between economic pressure and children's externalising problems was not significant ($r=.04$). Because there was no initial association between these variables, these data did not meet the criteria described by Baron and Kenny (1986) as necessary to define a mediational pathway. However, an independent variable can have an indirect effect on a dependent variable, even if they are not correlated, if the independent variable influences a third (or intervening) variable, which in turn affects the dependent variable (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002). Figure 3 (Panel A) shows the first theoretical step in testing the model, whereby the intervening role of marital conflict was examined. Economic pressure was significantly associated with concurrent levels of marital conflict ($\beta=$

.21, p<.01) and conflict was positively related to children's behaviour problems (β= .12, p<.05).

Next, the role of parents' depressed mood in mediating the effect of economic pressure on marital conflict was examined. Figure 3 (Panel B) shows that economic pressure was related to both mothers' and fathers' mood (β=.33, p<.01; β=.16, p<.01 respectively). Depressive symptoms were in turn related to elevated levels of conflict (mothers: β=.22, p<.01; fathers: β=.29, p<.01). The drop to non significance of the association between economic pressure and inter-parental conflict, on the addition of parents' depressive symptoms to the model, suggests that depressive symptoms mediate the concurrent association between perceived financial strain and conflict (Baron & Kenny, 1986). Neither mothers' nor fathers' depression were significantly associated with children's adjustment. The association between marital conflict and children's externalising problems remained marginally significant.

On the addition of parent – child communication to the model (Figure 4), tests revealed that neither fathers' nor mothers' depressive symptoms were significantly associated with increasingly negative parent-child communication styles. Conflict on the otherhand, was positively associated with parent-child relations (β=.14, p<.10). Parent-child communication was related to adjustment (β=.39, p<.01), indicating that parent-child relations served as a linking mechanism between family stress and child adjustment. These results support the hypothesised relations between theoretical constructs. However, as outlined in the previous chapter, cross sectional tests have significant limitations. Mediational models specify particular causal and temporal relations between a predictor, mediator, and outcome (Baron & Kenny, 1986; Holmbeck, 1997), however cross sectional designs cannot distinguish the temporal

ordering or causal direction of constructs, and thus it is possible that other iterations

of the model may fit the data equally well (Grych et al., 2003).
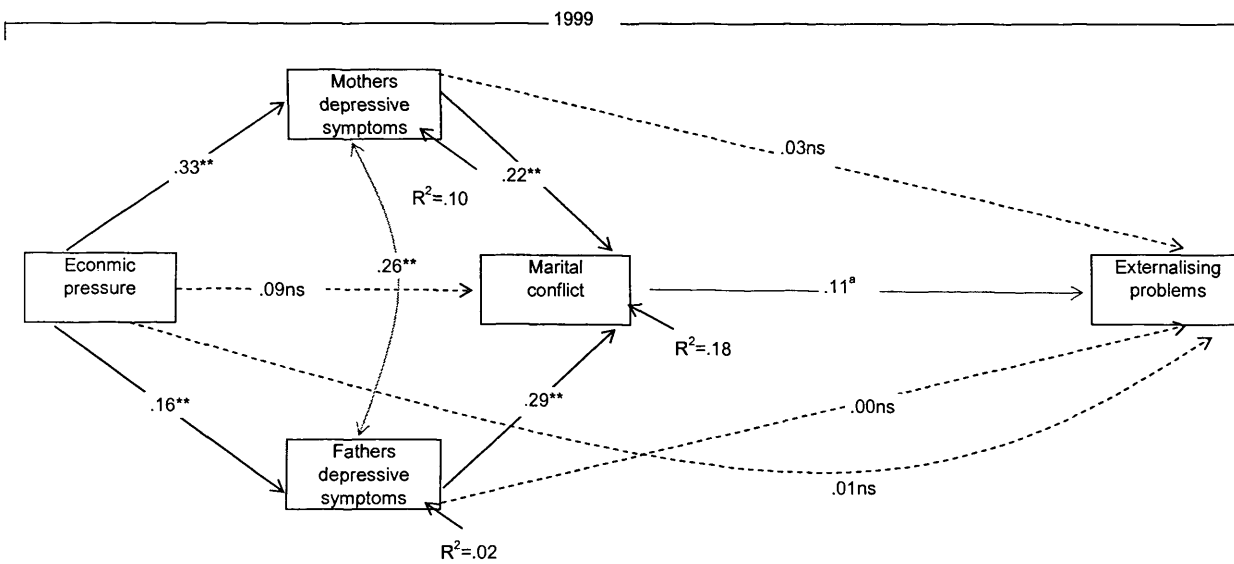
Panel A
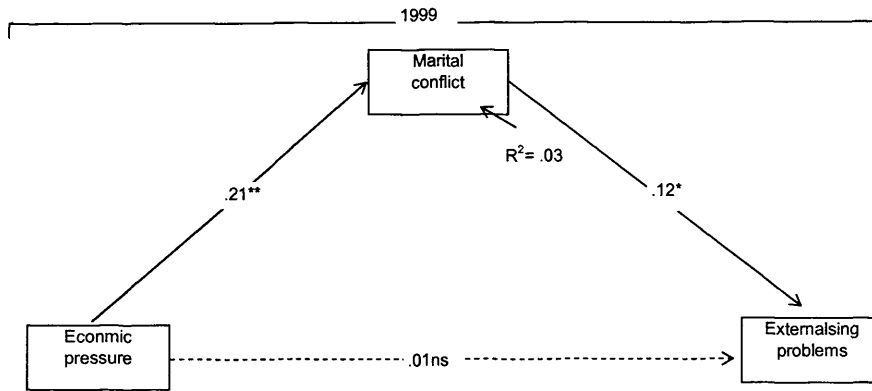
Panel B

Figure 3. Association between economic pressure, marital conflict and adolescent externalising behaviour (Panel A). Association between economic pressure, mother's and father's emotional distress, marital conflict and adolescent externalising behaviour (Panel B), $^a p<.10$, $^*p<.05$, $^{**}p<.01$,^{ns}not significant.
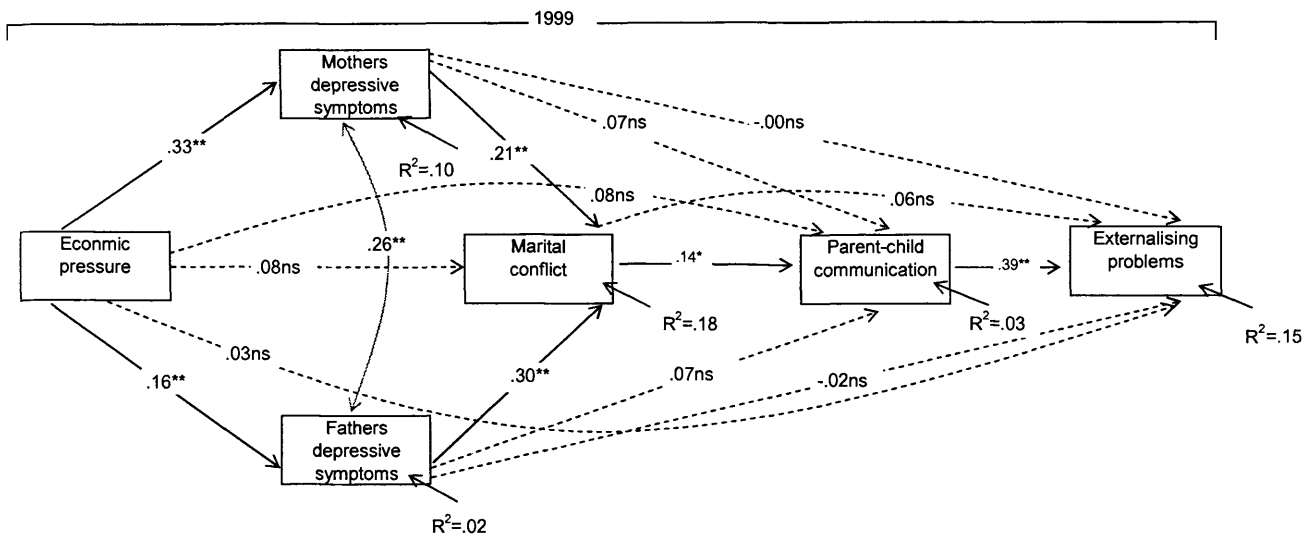
Figure 4. Association between economic pressure, mother's and father's emotional distress, marital conflict, parent – child communication and adolescent externalising behaviour, [a]$p<.10$, *$p<.05$, **$p<.01$,[ns]not significant.

Whilst only experimental designs are able to address questions of cause and effect, prospective longitudinal designs overcome the limitations of cross sectional designs somewhat, by allowing investigation of whether change in one variable predicts later change in a second variable, giving greater confidence in the specified direction of effect between constructs.

Longitudinal findings

Initial tests showed that parents' combined report of economic pressure in 1999 was not related to child and teacher reports of children's externalising problems, assessed in 2001, meaning again that these data did not meet Baron and Kenny's (1986) criteria necessary to define a mediational pathway. Therefore, any intervening mechanism of effect relating economic pressure to children's behaviour problems is described in terms of linking, rather than mediating the association (Mackinnon et al. ,

2002). Several studies have demonstrated indirect effects in the absence of an initial correlation (Grych et al. , 2003; Harold et al. , 2007).

Figure 5 (Panel A) presents results for the model that examines the role of inter-parental conflict in linking perceived economic pressure to children's externalising behaviour two years later. Economic pressure was marginally associated with inter-parental conflict in 2000 (β =.13, p<.10), and inter-parental conflict was in turn marginally associated with children's later externalising problems (β = .11, p<.10).

Figure 5 (Panel B) shows the addition of mothers' and fathers' depressive symptoms to the model. Results revealed that economic pressure was significantly related to mothers' concurrent symptoms of depression (β = .24, p<.01), and that the association with fathers' symptoms was approaching significance (β = .11, p<.10). Mothers' and fathers' symptoms were found to be moderately and positively related (r=.31, p<.01). With relation to the association between parent symptoms and inter-parental conflict, both mothers' (β = .16, p<.05) and fathers' (β = .26, p<.01) symptoms were significantly related to marital conflict assessed one year later, although the association was slightly stronger for fathers. This is also reflected in the magnitude of the zero order correlations. The drop to non significance of the path between economic pressure and marital conflict indicates that parents' symptoms mediated this association (Baron & Kenny, 1986). Neither mothers' nor fathers' depressive symptoms were related to externalising behaviour two years later, although, marital conflict was marginally related to behaviour problems (β = .12, p<.10).

Figure 6 presents the results of a model that tested the role of parent-child relations in communicating the impact of economic pressure, disrupted parent affect

and inter-parental relations to children's adjustment. There was no association found between parent depressive symptoms and diminished parent-child communication. Nor were direct effects observed of parents' symptoms at Time 1 on children's symptoms at Time 3. As expected, inter-parental conflict was positively associated with parent-child relations, assessed concurrently (β = .40, p<.01). Parent-child relations were in turn associated with externalising problems one year later (β = .41, p<.01). Based on the marginal effect between marital conflict and externalising observed in Figure 5 (Panel B), these results indicate that diminished parent child communication serves to link, rather than mediate, the effects of parents' depressive symptoms and conflict in the context of economic pressure to children's later adjustment difficulties.

Controlling for child symptoms at Time 1

As an additional step in the longitudinal analyses, the effect of children's initial symptom levels on all theoretical variables was controlled for. Controlling for the stability between behaviour problems over the two year lag provided an index of change in adjustment that was a function of the proposed family process variables included in the model (Grych, et al. , 2003; Kessler & Greenberg, 1981). Further, evidence presented earlier (Patterson, 1982) suggests that child behaviour problems may exacerbate the family stress process. Hence, estimation of the relationship between children's behaviour problems and parents' symptoms of depression, as well as the quality of family relationships, may provide some insight into the role that children's behaviour problems may play in determining the quality of family relationships.

Figure 7 presents results for a model controlling for children's externalising at Time 1.

Panel A
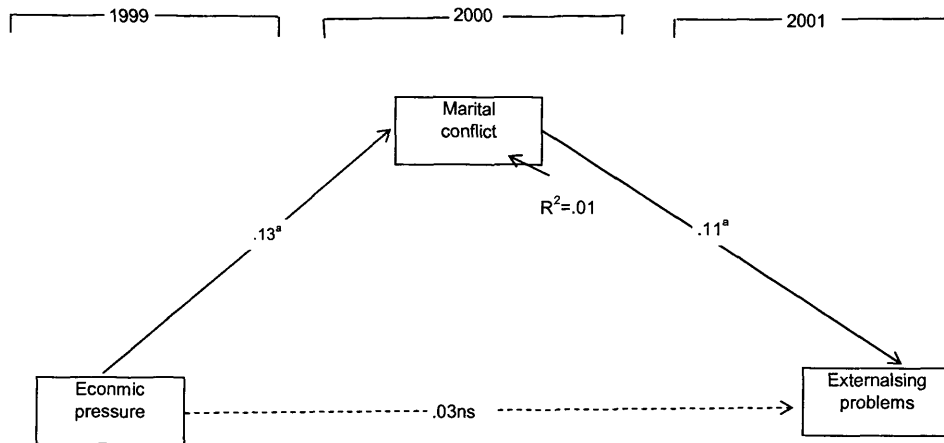
Panel B
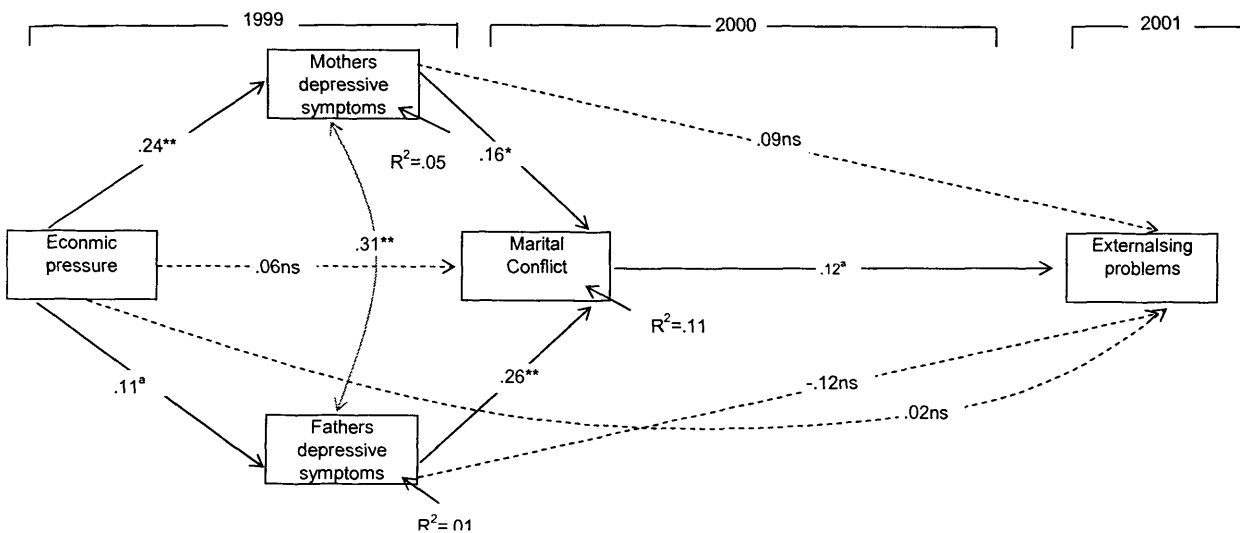
Figure 5. Association between economic pressure, marital conflict and adolescent externalising behaviour (Panel A). Association between economic pressure, mothers' and fathers' emotional distress, marital conflict and adolescent externalising behaviour (Panel B), [a]$p<.10$, *$p<.05$, **$p<.01$,[ns]not significant.

Figure 6. Association between economic pressure, mothers' and fathers' emotional distress, marital conflict, parent – child communication and adolescent externalising behaviour, [a]$p<.10$, *$p<.05$, **$p<.01$,[ns]not significant.

Reflecting earlier tests, on the addition of Time 1 externalising problems, economic pressure remained significantly associated with mothers' depressive symptoms ($\beta = .24$, $p<.01$) and marginally associated with fathers' symptoms ($\beta = .11$, $p<.10$). The magnitude of neither relationship was substantially reduced by the addition of child behaviour problems to the model, which is to have been expected based on the non significant zero order correlations between Time 1 externalising problems and parents' depressive symptoms. As in Figure 6, both mothers' and fathers' depression was related to inter-parental conflict ($\beta = .16$, $p<.05$; $\beta = .25$, $p<.01$). Parents' conflict was significantly associated with concurrent parent-child relations ($\beta = .32$, $p<.01$). Parent-child relations were, in turn, related to externalising problems one year later ($\beta = .25$, $p<.01$).

Parents' report of economic pressure was not significantly correlated with adolescents concurrent externalising behaviour (r=.01). Concurrent associations between children's externalising behaviour and parent symptoms were non significant. Importantly, children's earlier behaviour problems were found to exert a significant positive effect on both inter-parental conflict (β = .12, p<.10) and also parent-child relations (β = .26, p<.01), both measured one year later. Finally, externalising problems showed a high level of stability over the three year lag (β = .53, p<.01).

Taken together, these results replicate previous tests of the family stress model (Conger et al., 1992, 1993, 1994, 2002). Consistent across all analyses was the finding that economic pressure was related to increased inter-parental conflict through husbands' and wives' depressed mood. In turn, inter-parental conflict was found to be indirectly related to children's behaviour problems through lower quality parent-child communication. Importantly, this pattern of results was replicated using both cross sectional and longitudinal data and held even when the effects of children's earlier behaviour problems were partialled out of all variables of interest. Collectively, these results indicate robust support for the proposal that contextual factors represent increased risk for negative child outcomes through decreases in parents' psychological well being and disruption to key family relationships. Additionally, these results extend the existing body of literature in demonstrating that the process through which contextual risk affects children, identified in earlier work, is maintained even after controlling for the stability over time in children's externalising symptoms and controlling for the effects of children's behaviour problems on parents' psychological health, inter-parental conflict and parent-child relationship quality. Last, these results add to the body of cross cultural tests of the Family Stress Model

by indicating that the process identified in earlier work undertaken in the U.S. and

other countries has relevance to understanding the psychological adaptation of
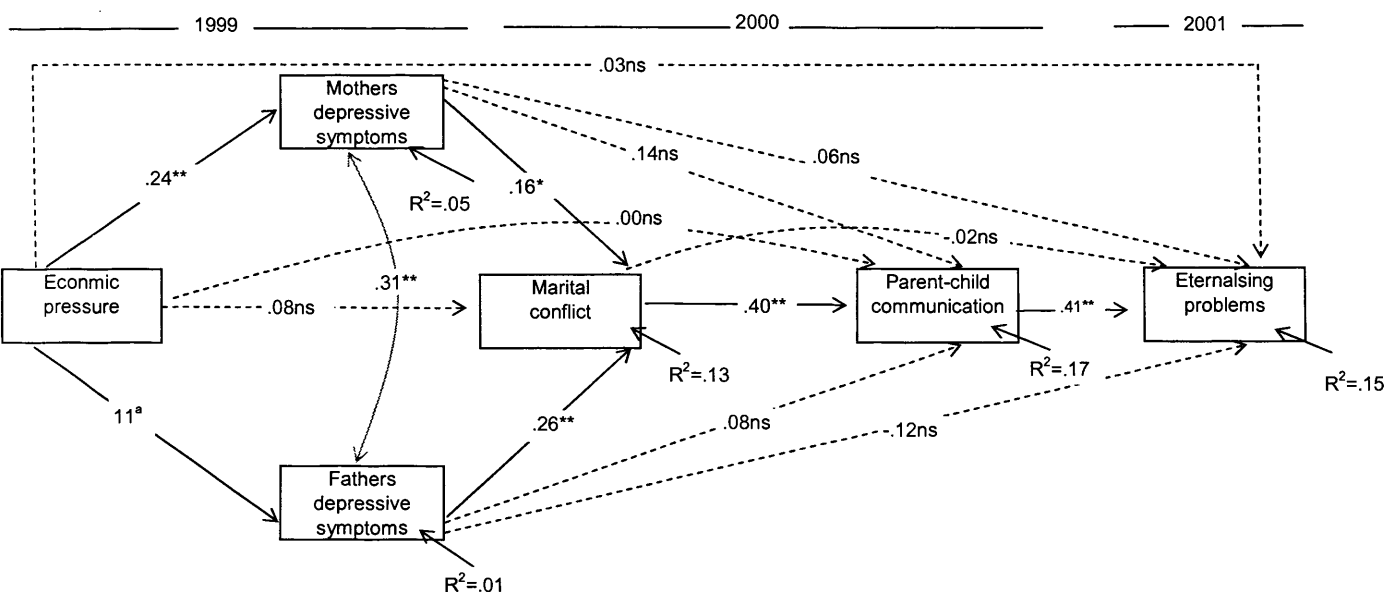
children living in the UK.
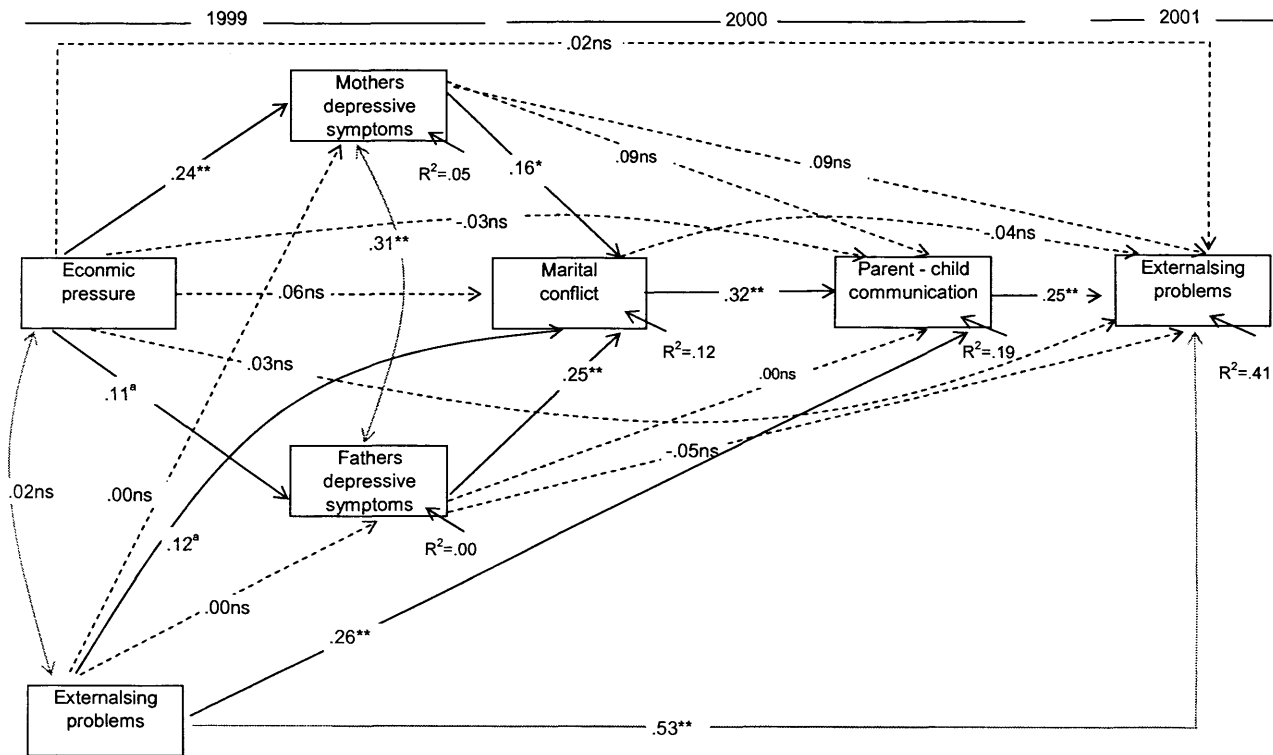
Figure 7. Association between economic pressure, mother's and father's emotional

distress, marital conflict, parent – child communication and adolescent externalising

behaviour, controlling for earlier adolescent adjustment [a]$p<.10$, *$p<.05$,

**$p<.01$,[ns]not significant.

Discussion

This chapter had two primary aims. The first was to locate the occurrence of

interparental conflict in a broader ecological context (Bronfenbrenner, 1977) in order

to gain some insight into its source. The second was to highlight the role of disrupted

family relationships, specifically the inter-parental and parent-child relationships, as

the primary route through which risks outside the immediate family context may

indirectly affect child adjustment. The broader aim of this thesis is to examine the

processes through which inter-parental conflict and violence may affect children and

thus, this chapter serves the purpose of identifying perturbations in the parent-child relationship as one mechanism through which conflict may be communicated to children, whilst also locating this mechanism in a broader context.

With particular focus on the risk that economic pressure may pose to children's functioning, this study set out to test the propositions of the Family Stress Model (Conger et al. , 1992; Conger et al. , 1993; Conger et al. , 2002) using cross sectional and longitudinal data derived from a British sample of families. Both cross sectional and longitudinal analyses yielded results consonant with earlier tests of the model (Conger et al. , 1992; 1993), in that economic pressure influenced children's behaviour problems indirectly, through parents' depressed mood, increased inter-parental conflict and diminished parent-child relationship quality. This replicates the pattern of effects yielded in earlier work and, moreover, shows that they hold constant over time and after accounting for children's earlier adjustment problems.

Economic pressure was found to be related to both concurrent levels of inter-parental conflict and conflict assessed one year later, although consistent with earlier work in both instances this relationship was found to be mediated by both mothers' and fathers' depressed mood. Psychological pressure emanating from financial difficulties may give rise to parents' irritability and depressed mood (Berkowitz, 1989). This in turn may deplete spouses' ability to deal effectively with everyday issues arising in the context of their intimate relationship, thus giving rise to increased rates of conflict (Du Rocher, Schudlich, Papp & Cummings, 2002). There was a slight disparity in the pattern of relations between economic pressure and mothers' and fathers' depressive symptomolgy, where in the longitudinal model economic pressure was more strongly related to mothers' than fathers' depression. That mothers should be affected by economic pressure to a greater extent than fathers is at odds with

previous tests of the Family Wide Model which have found, at least within time, that economic pressure significantly increases the emotional distress, including the depressive symptoms of both parents (Conger et al. ., 1994; Kwon et al. , 2003). Some studies have revealed gender differences nevertheless, but these have tended to indicate that men are more susceptible to emotional and behavioural problems as a result of economic problems than women (e.g. Conger et al. , 1990; Kelvin & Jarrett, 1985; Liker & Elder, 1983). One explanation may be down to the division of labour in households where women as primary caregivers may also tend to make the household decisions relating to grocery shopping and child care. In the event that a family experiences financial difficulty, these types of outgoings may be reviewed and cut back on, with wives' shouldering much of the pressure by attempting to adjust the everyday running of the family to fit with financial constraints (Leinonen et al. ., 2003). Further, wives may be more likely to manifest their distress as symptoms of depression (Pearlin, 1989). Thus disparity across the link between economic pressure and mothers' and fathers' symptoms may represent a qualitative difference in the way that distress is manifest across husbands' and wives', rather than a quantitative difference in how much distress is experienced in the face of stress. Nevertheless, it is difficult to speculate as to whether this represents a trend to be further explored or simply an idiosyncrasy specific to these results.

In both the cross sectional and longitudinal models, parents' reports of conflict were marginally related to children's concurrent and later externalising symptoms. That parents' symptoms of depression were not directly related to children's adjustment problems suggest that increased conflict between parents represents a key route through which the risk associated with contextual factors, such as economic pressure, may be introduced into children's' proximal environment. However, the

relationship between parents' reports of conflict and children's externalsing problems was relatively weak when assessed both within and across time. In contrast, children's reports of conflict have been found to be strongly related to their concurrent and later levels of internalising and externalising symptoms (Grych et al. 2003), and are found to be more potent predictors of adjustment relative to parent reports (Grych et al. , 1992; Kerig, 1998a; Kitzman & Cohen, 2003). This suggests that assessing conflict from the child's perspective may reveal unique information over and above that provided by parents, and may be crucial for understanding variation in children's adjustment (Davies & Cummings, 1994; Grych & Fincham, 1990).

The addition of parent-child communication to the model showed, as expected, that inter-parental conflict was linked to the quality of the parent-child relationship. An extensive body of literature, a synopsis of which was presented earlier, suggests that family stress, particularly marital conflict and violence, may disrupt parenting and diminish the quality of the parent-child relationship (Erel & Burman, 1995; Holden & Ritchie, 1991). Attachment theory suggests that inter-parental conflict may diminish children's sense of security by undermining children's confidence in parents as a safe haven (Owen & Cox, 1997; Davies et al. , 2006). Further, parents' embroiled in conflict with their spouse may be more hostile or less involved with their children (Holden et al. ., 1998; Katz and Gottman, 1996; Margolin et al. , 2003; Margolin et al., 1996; Sturge-Apple et al. ., 2006), which may in turn impact on children's externalising problems. In both instances, the quality and quantity of communication between parents and children may be impaired, meaning that children are less likely to furnish their parents with the type of information that may enable parents to keep track of, and restrict children's problem behaviours (Kerr & Stattin, 2000; Stattin & Kerr, 2000). This is entirely supported here, with analyses

revealing that more negative communication between parents and children was related to both concurrent levels of behaviour problems as reported by children and teachers, as well as those assessed one year later. In this case the quality of the parent-child relationship served as the linking mechanism through which family disruption emanating from economic stress influenced children's behaviour problems.

That neither parents' distress nor inter-parental conflict served as unique predictors of adjustment in the model underscores that consistent with the predictions of the family stress model, parenting processes serve as the *primary* mechanism through which family stress impinges on child adjustment. Moreover, that similar results were derived using longitudinal data, and after accounting for the stability in children's externalising behaviours over time, suggests that disruption in children's primary family relationships serves as a mechanism through which earlier family stress affects children's longer term adjustment.

Yet as outlined in Chapter 1, if children are only affected by inter-parental conflict through changes in the quality of the parent – child relationship, then they need not actually be present, or directly exposed to marital conflict in order to experience its effects. However, children who are exposed to overt marital conflict are found to respond more negatively than children who experience so-called covert conflict (Buehler, Krishnakumar, Stone, Anthony, Pemberton, Gerard & Barber, 1998; Emery, 1992). Similarly, children are more distressed when they are in closer physical proximity to violence (Martinez & Richters, 1993). This suggests that there may be something particular to children's direct experience of conflict; over and above the implications it may have for parenting, which serves to explain their psychological adaptation. This is demonstrated by Stocker, Richmond, Low, Alexander and Elias (2003) who found that the meaning that children take from their

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parents' conflicted exchanges accounted for unique variance in children's internalising problems, over and above that accounted for by children's and observers ratings of negative parenting. What is more, recent investigations have indicated that when considered together, children's appraisals of inter-parental conflict rather than their evaluations of parent-child relationship quality may convey effects of inter-parental conflict to adjustment (Harold et al. , 2007; Walters, Shelton & Harold, 2008). This work raises the contention that children's understanding of the causes and consequences of family relationships may in fact represent the central mechanism through which children are affected by family stress and disrupted family relationships.

Nevertheless, as it stands this work provides support for the proposals of the Family Stress Model. Particularly notable is the consistency in findings across cross sectional and longitudinal tests of the model. Replication of earlier results, after controlling for children's earlier symptoms, provides some extension to the existing body of longitudinal work that has been undertaken to date. Externalising behaviour in particular is shown to be highly stable over time (Kokko & Pulkkinen, 2005) and thus, by accounting for the relationship between earlier and later symptoms, the model enabled an estimate of change in children's externalising problems as a function of the intervening processes (Grych et al. , 2003), specified by Conger and colleagues. This rules out the alternative hypothesis that children's symptoms are simply a function of earlier problems. Accounting for the effect of children's earlier symptoms on the intervening variables identified in the model is also of benefit. First, as noted in Chapter 1, children experiencing higher levels of distress may tend to report more negative feelings with respect to the quality of family relationships. Thus, being able to partial out variance in the measure of parent-child relationship quality, accounted

for by children's trait negativity bias (Watson & Pennebaker, 1989), was a useful control. Further, estimation of the effect of children's behaviour problems on parents' symptoms and the quality of family relationships provided some insight into the role that children may play in exacerbating the family stress process. In general, more work has focussed on the role that children may play in shaping in the quality of parent-child relations (Patterson, 1982). A recent study, however, has shown that behaviour problems emanating from exposure to parents' discord may serve to increase later levels of inter-parental conflict (Schmerhorn, et al., 2007). These findings showed that children's externalising behaviour was related to both increased marital conflict and decreased parent-child relationship quality which, consistent with a systems perspective (Cox & Paley, 1997), suggests that children play an active role in shaping *multiple* family relationships, even those in which they are not directly involved. Surprisingly, children's externalising problems were not linked to either mothers' or fathers' individual symptoms; thus negative effects seem to impact at a dyadic rather than individual level, although it is likely that disruptions in the inter-parental and parent-child relationships feed back to inform parents' symptoms of depression.

Collectively, these results are consistent with earlier work indicating that economic factors influence children's adjustment over time through the interplay of several family factors. Specifically, these results demonstrate that economic pressure, as a source of risk external to children's immediate developmental setting, may impinge on their wellbeing, through parents' emotional distress and the disruption caused to family relationships. These results highlight one possible antecedent of marital conflict and underscore the role of the inter-parental relationship as a key route through which broader risk is communicated to the family context. These

results in turn locate the parent-child relationship as the primary gateway through which proximal and distal sources of risk are conveyed to children.

The process identified here likely has relevance to understanding the mechanism through which other sources of contextual risk, such as neighbourhood violence and parent antisocial behaviour, may exert indirect effects on children. Further, the Family Stress Model may prove relevant to understanding the ecology of domestic violence, where chronic strain may increase the incidence of intimate partner violence (Berkowitz, 1989; Frye & Karney, 2006).

With these findings in mind, interventions that target parenting may represent an effective way of interrupting the transmission of family stress to children. In particular, a number of programs target ineffective parenting as a means of ameliorating a family environment marked by coercive interactions between parents and children. For example, in a series of randomised preventative studies, the Oregon Social Learning Centre has demonstrated the effectiveness of parent training programmes in reducing children's non compliant behaviours across varying family constellations, including single parent families and step families (DeGarmo & Forgatch, 2005; Forgatch, DeGarmo, Beldavs, 2005). In these studies change in parenting is found to be associated with change in children's adjustment outcomes, demonstrating the effect of increased parenting skills on children's adjustment. Work has also demonstrated that children mandated to foster care owing to delinquent behaviours, show better outcomes when they are placed with foster parents who have been trained in effective child management strategies, than those children placed in regular foster care (e.g. Chamberlain, Leve & DeGarmo, 2007).

The results presented here show that coercive parent-child relations often occur in the context of other family dysfunction, and also within the context of

broader ecological risk. Nevertheless, programmes focussing on improving parenting often pay little heed to the context in which coercive patterns of interaction between parents and children may arise. These findings suggest that the inter-parental relationship and the parent-child relationship are highly intertwined and that inter-parental conflict serves as a catalyst for problems in the parent-child relationship. A warm and supportive couple relationship may buttress parents from the worry caused by external pressures (Elder et al., 1995) and thus, it may be particularly difficult for parents to maintain positive parenting, even after parenting skills training, when this source of support is eroded and the decreased quality of spousal relations becomes an added concern. Indeed, programmes that focus exclusively on parenting have been shown to be more likely to fail for those families who had conflicted or distressed marriages (Dadds & McHugh, 1992; Dadds, Schwartz & Sanders, 1987). Moreover, findings suggest that parent training, that also includes a focus on the couple relationship, may improve marital and parent child relations (Webster-Stratton, 1994), thus addressing the two components of the mechanism by which strain, caused by extraneous pressures such as economic hardship, is introduced into the family domain.

Whilst the findings of this study shed light on the process through which children may be affected by risky developmental contexts it is not without its limitations. First, only children's behaviour problems were considered in this instance, although other tests of the family stress model have shown that this process extends to explain children's internalising symptoms (Conger et al. , 2002) and also aspects of positive adaptation (Conger et al. , 1992; 1993). Further replication of this model is required, to determine whether this process can be extended to explain the development of children's internalising symptoms, whilst taking in to consideration their earlier symptoms.

Whilst this study represents an effort to locate the origin of marital conflict, it gives only an idea of the circumstance in which conflict and other family adversity occurs. In reality couple conflict is often determined by a complex constellation of factors and while this is an attempt to show the conditions that set particular processes in motion, this model does not capture the many interrelationships between the myriad of contextual factors that may impinge on family and child functioning.

Further, this study did not include a measure of economic hardship calculated as an index of income and income to needs ratio and other objective measures of family finances. Whilst others studies have shown economic hardship exerts effects on family process through the psychological pressure it exerts on parents (Conger et al., 1992, 1993, 2002; Lempers & Clark-Lempers, 1997), it is difficult to determine here to what extent strain is brought about by actual changes in income or a short fall in income relative to needs, and to what extent economic pressure results from social comparison (Drukker et al., 2006), where other families relative to ones own are perceived to be experiencing economic good fortune. Although beyond the scope of this study, in a society where there is increasing polarisation between the wealthy and the poor (Dorling et al., 2007), along with an increasing interest in celebrity lifestyle, studies providing insight into the reasons underpinning perceptions of economic pressure may be warranted. Examination of scores relating to perceived financial strain experienced by couples included in this study suggests that more than half of parents perceived their families to have little or only moderate difficulty in making ends meet., This sample therefore may not represent the full spread of economic diversity, although if this is the case then these findings suggest that even relatively low level economic pressure may set in motion sequelae that serve to influence children's adjustment.

A particularly important factor to consider in future tests of this model may be the timing and duration of children's exposure to economic hardship as a determinant of adjustment and the level of disruption to family functioning. For example, Simons (1978) suggests that children may be particularly sensitive to family economic hardship during adolescence and Pagani, Boulerice, Vitaro & Tremblay (1999) suggest that children who endure long term poverty are most at risk of academic failure, although in the case of extreme delinquency the risk of transitory poverty seemed to be particularly important. The present study did not make any control for the timing or duration of economic strain, which potentially may have moderated the impact of family level processes on adjustment.

Perhaps the largest caveat of this study, and indeed of many other tests of the Family Stress Model, derives from the core assumption underpinning the model that factors external to the family unit may impinge on children through the changes they evoke in parents' behaviour towards each other and towards children. There is little recognition that children might actively process and respond either directly to extra familial risk factors, or to the chain of family disruption which they might set in motion. Nevertheless, evidence is beginning to accumulate to suggest that risk may impact directly on children through their awareness of its presence in their lives and their appraisal of its meaning. For example, children's perceptions of neighbourhood safety appear to account for unique variance in their emotional and behavioural problems, even after accounting for the prosperity of the neighbourhood (Meltzer, Vostanis, Goodman & Ford, 2007). Further, Dogan, Conger, Kim and Masyn (2007) found that children's awareness of parents' antisocial behaviour partially accounted for the link between parent antisocial behaviour and adolescents' own behaviour. Critically, this effect was documented after parenting processes had been accounted

for suggesting that in this instance, children's awareness of parents' behaviour had a unique effect on children's adjustment, signalling that parenting was not the only mechanism through which risk operated to influence children. With specific reference to economic factors, evidence suggests that even young children have some understanding of the meaning of poverty (Chafel & Neitzel, 2005) and older children in particular may be aware of the family's financial standing. Financial difficulties may be a topic of conversation and conflict between parents and between parents and children (Conger et al.,1994) in explaining budgetary constraints. Second, children may be aware of qualitative shifts in family spending. Children cognizant of financial difficulties may feel responsible in part if parents are struggling to meet their children's basic requirements, which in turn may have implications for children's psychological functioning. Indeed, McLoyd, Jayaratne, Cebello & Borquez (1994) found that children's perception of economic difficulty predicted unique variance in children's internalising problems as well as in a measure of cognitive competence, over and above that accounted for by parenting behaviour. In a second study to take into account adolescent understanding of family economics, Conger et al. (1999) found that economic pressure predicted later distress through the implications that adolescents perceived financial difficulty to have for family functioning, even after taking into consideration the degree to which adolescents felt that their own activities were limited by the family's economic position.

The finding that adolescents' well being is particularly undermined by the perceived impact of economic hardship on the family unit is in keeping with a burgeoning corpus of literature, some of which was reviewed in the opening chapter, that demonstrates that children's responses to family interactions are largely shaped by children's understanding of these interactions in terms of the meaning and

consequences that children perceive for themselves, their parents, and family functioning as a whole (Davies & Cummings, 1994; Grych & Fincham, 1990). A handful of studies have begun to demonstrate that children's appraisals of inter-parental conflict exert effects on adjustment over and above children's, parents' and observer reports of parent-child relations (Stocker et al. , 2003; Harold et al. , 2007; Walters et al. , 2008).

The following chapter reviews extensively theory and empirical evidence which suggests that children may be affected directly by their appraisals of inter-parental conflict. This is followed in Chapters 4 and 5 by the development of a theoretical model which proposes that children's understanding of both the inter-parental and parent-child relationships may be important in explaining variation in children's psychological adaptation in the context of conflicted and hostile inter-parental relations. These studies serve to integrate the proposals of direct and indirect hypotheses in an attempt to provide a more comprehensive account of children's adaptation in the context of hostile inter-parental relations.

Overall, the results contained within this chapter serve to highlight the importance of the inter-parental and parent-child relationships in determining children's adjustment. The findings offer support for a well established process through which contextual risks are proposed to impact on children's development. More importantly, it sets the stage for a more detailed consideration of children's cognitions relating to the inter-parental and parent-child relationships and the role that these relationships, from the child's perspective, may play in explaining the impact of inter-parental conflict and violence on children's adjustment.

Chapter 3

The previous chapter found that inter-parental conflict affected children indirectly through disrupted parent-child relations. Increasingly however, there is recognition that the child's perspective of the environment in which they develop represents a key influence on their psychological well-being. Consistent with this are several of the perspectives described in Chapter 1, which highlight children's appraisal of inter-parental conflict as a mediator of its effect on child adjustment. There is limited articulation however of the way in which these perspectives may be usefully applied to understand child adjustment in violent family settings. Before turning to consider how specific aspects of this work might be utilised to explain children's adjustment in violent family settings, this chapter begins by reviewing aspects of social cognitive theory that have provided the foundation for appraisal models of inter-parental conflict. Following this, the influence of biological and genetic factors is briefly reviewed as they relate to child adjustment in the context of risky family settings. Next, a recent integrative model which suggests that the influence of these factors may be communicated to children's adjustment in part via children's disrupted cognitive processes is described. Finally consideration is given to the relevance of specific aspects of social cognition identified in the marital literature as important determinants of child adjustment, to understanding children's adjustment in the context of inter-parental violence.

Defining social cognition

As outlined in the opening chapter of this thesis, parents' and children's perspectives on inter-parental conflict and inter-parental violence may differ (Jouriles et al., 2001; Kitzmann & Cohen, 2003). Parents may underestimate children's exposure to conflict, presuming that which took place out of earshot or whilst the

child was in bed does not count. Further, children may attend to and remember events that parents did not experience as conflict. However, the importance of understanding the child's perspective on family relationships extends far beyond surveying the *amount* of conflict to which children have been exposed that parents did not know of or did not report. As Chapter 1 highlights, there are consistent individual differences in the way that children respond to conflict (Cummings et al., 1989; El-Sheikh, 1997; Grych, 1998). There is also variation in children's longer term adaptation in the context of similar family environments, with some continuing to function well, and others demonstrating worrying and significant levels of dysfunction (Grych et al., 2000; Harold & Howarth, 2004). The adult literature suggests that the way that individuals evaluate events shapes their impact (Compas, 1987; Garmezey, 1983; Rutter, 1983). Attention to children's subjective understanding of family relationships is therefore likely to provide insight into the short and longer terms effects of inter-parental conflict and violence on children (Grych & Cardoza-Fernades, 2001).

Attention to children's understanding of family interactions, and in particular the meaning which they derive from inter-parental exchanges, is anchored in the wider social cognitive literature which is concerned with "the social construction and development of meanings about the self and the social world" (Noam, Chandler & LaLonde, 1995, p.424). Social cognition can be defined as knowledge of the social world and interpersonal relationships (Fiske & Taylor, 1991). It relates to people's perceptions of themselves and others, as well as the theories they hold to justify those perceptions. One of the central features of this theory is based on Lewin's psychological field theory (1951). Rather than focus on an objective analysis of an individuals social environment, Lewin argued that what matters instead for understanding the influence of the social world, is the individual's perception and

interpretation of that world. In order to predict behaviour, the complete psychological field (the social environment as perceived by the individual) should be studied. The psychological field is a product of two pairs of factors: person and situation and cognition and motivation (Fiske & Taylor, 1991). Social cognition is determined by the person's needs, beliefs and abilities which function within a given situation or context. Cognition helps to determine what a person will do while the strength of motivation predicts whether, and to what extent, the behaviour will occur (Fiske & Taylor, 1991).

Social cognitive theory

Social cognitive theories have traditionally fallen in to one of two categories. Information processing theories focus on the way in which information is processed in response to the occurrence of a particular event or situation, and information transformation theories attempt to describe how experiences are stored in memory and are used to guide future information processing. Much of the seminal work focusing on the way in which children process information relating to social exchanges has derived from adult literature. Lazarus and Folkman (1984) propose that a psychological stressor arising in the environment elicits a response or reaction in the individual, via the intervening processes of cognitive appraisal and coping. Cognitive appraisal is an evaluative process which serves to examine why and to what extent a person–environment transaction is stressful, and the implications of the event for personal well-being. It is proposed that there are three aspects of cognitive appraisal: primary, secondary and reappraisal. Primary appraisal refers to assessing the form of an event as irrelevant, benign/positive, or stressful. Appraising an event as stressful may include experiencing harm or loss, threat or challenge. Harm/loss reflects sustained injury or loss to the person, threat reflects anticipated harm or loss, while

challenge reflects more positive appraisals relating to the gain or growth that may be achieved from the situation (Lazarus & Folkman, 1984). Secondary appraisal concerns an assessment of what might and can be done about the stressful situation. Secondary appraisals can take two forms as described by Bandura (1977). 'Outcome expectancy' refers to the person's evaluation that a given behaviour will lead to certain outcomes, while 'efficacy expectations' refer to the person's expectation that he/she can successfully execute the behaviour to produce the outcomes. Reappraisal refers to a changed appraisal based on new information (Lazarus & Folkman, 1984). The essence of the model is that an individual's appraisal of the meaning of an event determines their emotional and behavioural response to that event. This framework views the person and the environment in a dynamic reciprocal relationship, whereby a consequent at time one can become an antecedent at time two and the cause can be either in the person or the environment (Lazarus & Folkman, 1984).

The aspects of social cognition highlighted by Lazarus and Folkman (1984) are clearly evident in the information processing model of social competence developed by Dodge and colleagues (e.g. Crick & Dodge, 1994; 1996). The model contends that children's social behaviour is a product of a series of processing steps, which are moved through before the child generates a response to a stimulus event. First, the model proposes that the child perceives and encodes the incoming information, after which they set about interpreting these cues which may consist of one or several processes, such as making attributions of causality and intent. Following this, children clarify their goal or select a desired outcome for the situation. It is suggested that children may come to the situation with a predisposed goal orientation but this may also be revised based on the situation. Next, it is proposed that children generate a raft of alternative responses, either from memory, or if the

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situation is novel they may construct new behaviours. These responses are evaluated and the most positive is chosen, which may depend on the level of confidence with which each can be enacted and how appropriate each option is according to the situation. Finally the chosen response is behaviourally enacted.

Whilst deficits in processing at any stage of the information processing cycle may account for children's maladaptive responses, a large body of work has focused on the way that children's assessment of another's intent leads to aggression. Intent attributions involve interpreting social cues and using those cues to infer motives to others, for example determining whether peers are acting with benign or hostile intent (Crick, Grotpeter & Bigbee, 2002). Studies of individual differences in children's inferences about their peers' intent have shown that physically aggressive children demonstrate hostile attributional biases in response to ambiguous, instrumental provocation situations (de Castro, Veerman, Koops, Bosch & Monshouwer, 2002). According to Crick and Dodge's model (1994, 1996), a hostile attribution bias increases the likelihood of aggressive behaviour in response to peer provocation, as aggression functions as a defence against a perceived threat. Whilst much of this work has focused on peer contexts, another body of related research has focused more heavily on how children make attributions within family contexts, and the consequences of these attributions for the quality of family relationships. Whereas studies relating to the peer context have focused mostly on attributions of intent, some of these family studies have, in addition, included an analysis of causal attributions, which concern who or what produced an event (Fincham & Jaspars, 1980; Shaver, 1985). Much of this work is based on findings within the marital literature, which show that a particular attributional style may amplify the impact of negative events (Bradbury & Fincham, 1992; Fincham, Harold & Gano-Phillips, 2000). Specifically,

attributions for negative behaviour that infer that the behaviour was intentional, selfishly motivated and blameworthy; locate the cause of the behaviour in the partner; and view the cause of the behaviour as global and stable, accentuate the impact of a partner's behaviour (Bradbury & Fincham, 1992). Such attributions are characterised as conflict promoting and are associated with relatively more negative behaviour towards the partner (e.g. Bradbury, Beach, Fincham, & Nelson, 1996; Bradbury & Fincham, 1992). This work has been extended to the study of parent-child interactions. Here it is found that children's conflict promoting attributions are associated with the perceived quality of the parent-child relationship, as well as actual levels of parent – child conflict, as reported by both children and their parents (Brody, Arias & Fincham, 1996; Fincham, Beach, Arias & Brody, 1998). Importantly, this relationship has been shown to hold up over time (e.g. MacKinnon-Lewis, Castellino, Brody & Fincham, 2001), where earlier attributions predict later behaviour, and is found to apply to both mother-child and father-child relationships (Mackinnon-Lewis et al., 2001; Mackinnon-Lewis, Lamb, Hattie & Baradaran, 2001). The attributions that children make for family behaviour have also been linked to the development of broad indices of adjustment, as well as with conflict in specific relationships (Benson, Arditti, Deatiles & Smith, 1992; MacKinnon-Lewis et al., 2001; Marcus, Lindahl & Malik, 2001).

Children's beliefs about the acceptability of aggression and the justifiability of its use represent later steps in the proposed information processing sequence (Crick & Dodge, 1994, 1996). Biases here, as opposed to earlier in the process, which underpins the misattribution of hostile intent, are proposed to lead to children's use of proactive aggression in order to achieve a desired goal (e.g. Crick & Dodge, 1996; Smithmyer, Hubbard & Simons, 2000). These children are more likely to evaluate

aggression positively, expect it to lead to positive outcomes, and view it as an appropriate way of achieving a goal (Crick & Dodge, 1996; Dodge, Lochman, Harnish, Bates, Pettit, 1997; Hubbard Dodge, Cillessen, Coie & Schwartz, 2001; Schwartz, Dodge, Coie, Hubbard, Cillessen, & Lemerise, et al., 1998). These patterns of social information processing may also be observed in older adolescents. For example, Kinsfogel and Grych (2004) found that boys who had witnessed aggression between their parents were more likely to view aggression as justifiable in relationships, to regulate their anger poorly, and report that their friends engaged in higher levels of abusive behaviour within their romantic relationships. Each of these factors in turn, uniquely predicted higher levels of aggression toward their dating partners.

Information processing is partly informed by previous experiences; experiences are represented by latent mental structures such as schemas and working models of relationships (e.g. the attachment bond), which comprise the child's social knowledge, and which guide future processing and behaviour (Crick & Dodge, 1994). Indeed, the social information processing perspective posits that children come to a social situation with a set of biologically limited capabilities and a memory bank of past experiences (Crick & Dodge, 1994). The theory contends that there is a reciprocal transaction between current information and that stored in memory, explaining how past experience may influence appraisals of a current situation, but also how online processing may add to or augment this store of knowledge relating to past experience. A schema is typically conceptualised as an organised cluster of knowledge, beliefs and expectations about a particular subject or situation (Grych and Cardoz-Fernandes, 2001). These cognitive structures are posited to represent the scaffolding around which memories of past events are stored, organised and retrieved

(Cantor & Kihlsrom, 1982; Markus, 1977). Of particular relevance here is the relational schema (Baldwin, 1992) which functions as a cognitive map to aid individuals in navigating their social world. These cognitive structures are hypothesised to include images of self and other, along with a script for an expected pattern of interaction, derived through generalisation from repeated similar interpersonal experiences (Baldwin, 1992). Relational schemas are an effective way to organise information relating to a particular relationship or type of interaction. Based on knowledge of past experience they enable individuals to generate expectations about what is to follow, and this in turn enables them to determine which course of action to take, a decision which is itself in part dictated by the success of previous actions in similar situations. It is proposed that people abstract scripts from repeated experience and apply these as blueprints to derive understanding in new situations.

Children's experiences of inter-parental conflict may be readily represented as schematic knowledge, as events that are highly salient and emotionally arousing are proposed to be more easily remembered and retrieved by children (Grych & Cardoza-Fernades, 2001). Nevertheless, in order to serve their purpose, schemas must be tolerably accurate (Bretherton, Ridgeway & Cassidy, 1990) and so children's schematic representations are supposed to be a fair approximation of their experiences. However, the information that children encode into schemas representing a given type of exchange depends on what they perceive and understand, therefore schema content also likely reflects children's interpretations of events or situations. Whilst prior knowledge and experience guides information processing, children's appraisal of an event also determines what is encoded in their representations. For instance, individuals are found to be more sensitive (Markus, Crane, Berstein & Siladi, 1982), and more efficient (Markus, 1977) in processing information for which

they have schematic representation. The upshot of this is that not all information gleaned from social interactions is treated equally. Instead, expectations based on past experience may lead to an attentional bias for particular types of information as individuals attempt to be prepared to act. By way of illustration, Pollak, Vardi, Putzer Bechner & Curtin (2005) found that physically abused children, in relation to non-abused children, showed greater monitoring of background anger that was irrelevant to a task on which they were working. The authors suggest these children were on alert, ready to respond should the situation escalate. Further, Luecken & Applehans (2005) found that children from divorced families showed attentional vigilance towards loss cues, relative to children from intact homes and bereaved children. Children experiencing higher levels of parental abuse showed a bias towards threat related cues. Tomkin (1979) suggests that children may show enhanced memory for the seemingly insignificant details relating to a traumatic event. Therefore, children previously exposed to high levels of conflict and violence between parents may be hyper-responsive to even the smallest sign that conflict is occurring, or is about to take place. Greater vigilance for threat is likely to lead to higher detection rates, which in turn feeds back into children's representation of their social environment as a frightening place.

Individuals not only preferentially notice schema relevant information; they also show greater ability to recall this information at a later date (Baldwin, 1992). Thus, children's negative representations of inter-parental relations may be chronically accessible when children are attempting to understand the meaning of a new exchange. Further, schema disconfirming information, for example memories of instances in which a positive outcome transpired, may be less accessible. Children's schemas may become strengthened over time as schema irrelevant information is

disregarded in preference for schema confirming information, or information is distorted to fit with existing beliefs. Piaget (1970) described accommodation and assimilation as processes through which children's schematic representations are updated and enriched. Accommodation is where new information is taken in and existing schemas are changed in order to incorporate this new information. Assimilation occurs when new information is changed and distorted to fit with already existing schemas. Fish-Murray, Koby and van der Kolk (1987) found that abused children's ability to accommodate new information into their existing schemas was weaker than non-abused children. Therefore, children's schemas may become strengthened over time, as schema irrelevant information is disregarded in preference for schema confirming information. These findings suggest that children use their stored knowledge about past events to make inferences about what will happen next in the course of a conflictual exchange, and also about the implications of the conflict for themselves, their parents and the family as a whole. Children who remember conflict that was disruptive, and which remained unresolved, will likely make more pessimistic evaluations than children who have observed their parents engaging in mutually respectful disagreement that is eventually worked out. For those children who have witnessed frequent inter-parental conflict, or for whom conflict is especially threatening, only minimal cues may be needed to prompt the activation of a schema (Grych & Cardoza-Fernandes, 2001) making maladaptive sets of expectations about the course and content of interactions chronically accessible. The proposed interaction between children's online processing of events and their past experience provides an explanation for the observation that children become sensitised to conflict (Cummings et al., 1989; El-Sheikh, 1997), whereby those children who have been exposed to frequent bouts of destructive inter-parental behaviour are found to respond more

negatively to subsequent conflicts between parents. In some instances, children who have been exposed to high levels of conflict and violence in the past are found to respond more negatively to even low levels of discord (Weber & O'Brien, 1999). In this instance, where there is a mismatch between the characteristics of an exchange and the intensity of a child's response, there is some indication that children's information processing is guided more heavily by their representations of previous conflict, rather than accurate online processing of the current situation.

Over time, it is suggested that particular patterns of information processing crystallise, becoming a personality – like characteristic that endures across time and that guides behaviour (Dodge, 2006; Harold, Pryor & Reynolds, 2001; Kozhevnikov, 2007). Children's experiences of conflict may not only inform the way they view subsequent exchanges between parents, but also exchanges occurring in the context of other relationships. It is suggested that children's early relationship experiences contribute to the development of a working model of relationships, which serves as a blueprint guiding children's formation of close and intimate relationships (Benson et al., 1992; Grych & Cardoza-Fernandes, 2001; Grych and Kinsfogel, 2004). For example, children's experience of inter-parental conflict and aggression in the family has been associated with attributions of hostility to peers (Dodge, Bates, & Pettit, 1990). Recent evidence showed that the relationship between overtly hostile inter-parental conflict and children's aggressive behaviour at school, as reported by teachers, was mediated by children's "aggressogenic cognitions" indicated by children's beliefs about the acceptability of retaliation and their likelihood to respond aggressively in ambiguous situations (Marcus et al., 2001).

Underscoring the importance of children's social cognitions as a mechanism through which social experience may lead to negative outcomes are findings

indicating that children's understanding and attributions are important in explaining the impact of even traumatic events, over and above objective aspects of the situation or event itself. For example, in a study of children who had sustained traumatic injuries that required a stay in hospital, Salmon, Sinclair & Bryant (2007) found that children's appraisals of vulnerability and fears of being harmed again predicted their trauma symptoms. These were measured one month following injury after controlling for children's age and gender, the severity of injury, parent trauma symptoms and children's depression. The findings indicate that maladaptive cognitions predict children's acute trauma symptoms over and above the actual severity of injury. In considering the role of children's appraisals in predicting adjustment in the face of risky family settings, Brown & Kolko (1999) explored the types of attributions that children made for the physical abuse they experienced at the hands of a parent. They found that children's attributions relating to the abuse itself, as well as their general attributional style explained unique variance in child outcomes, over and above that explained by the severity of abuse. Specifically, external attributions where the cause of abuse was placed with another were linked with externalising behaviours, whereas children's location of cause with the self was more closely linked with internalising symptoms. The same pattern of results was found for children's more general cognitive style, with the tendency to attribute negative events in general to the self linked with internalising, and the propensity to interpret the behaviour of others negatively linked with externalising. Similar findings have been generated in relation to children's experiences of sexual abuse (Spaccerelli, 1995; Spaccerelli & Fuchs, 1997). Importantly, these findings illustrate that the types of attributions made in the context of even very aversive family relationships can shape the impact of events, over and above the objective characteristics of experience. Taken together, this

evidence points to the importance of considering the child's perspective on family events and relationships in order to better understand their psychological adaptation in the context of hostile and aggressive family settings. However, children's adjustment may have biological and genetic underpinnings that may increase the likelihood of a particular outcome, or which may dictate that children are more susceptible to environmental risk through the processes that are engendered on exposure.

Genetic and biological influences on children's adjustment

It is well established that genes play an important role in the aetiology of childhood adjustment, including internalising and externalising symptoms (Rutter & Silberg, 2002). Children who have disruptive behavioural problems are more likely to have parents who show antisocial behaviour problems (e.g. Biederman, Munir & Knee, 1987), and it is estimated that genes influence 40%-50% of population variance in antisocial behaviour (Rhee & Waldman, 2002), with an even greater proportion of variance being accounted for when aggressive antisociality is considered (Tackett, Kruger, Ianono & McGue, 2005). Similarly, analysis of the incidence of anxiety and depressive disorders in monozygotic and dizygotic twins reveal that between 30-40% of the variance in co-occurrence between individuals can be attributed to genetic variation (Hettema, Neale & Kendler, 2001). Thus, it seems that a substantial proportion of the variation in adjustment problems may be attributed to the genetic makeup of an individual. Further, factors such as parenting, inter-parental conflict and economic pressure, that are often cited as environmental factors that increase the risk of child adjustment problems, may in part represent genetic influences whereby the same genetic factors that influence parents' behaviours are passed to children, which in turn are manifest as behaviour problems or increased rates of depression (Moffit, 2005; Plomin, 1995; Reiss & Leve, 2007; Spotts et al., 2004). This raises the issue as

to whether aversive environmental contexts simply represent a proxy for a genetic predisposition to psychopathology (Reiss & Leve, 2007). Jaffe, Caspi, Moffitt & Taylor (2004) investigated the extent to which the affect of physical maltreatment on children's antisocial behaviour represented an environmental effect or a genetically mediated process. Their results showed that maltreatment predicted children's antisocial behaviour even after accounting for any genetic transmission effect, suggesting that this particular environmental risk plays a causal role in predicting children's adjustment over and above the transmission of heritable traits and behaviours.

In addition to the direct effects that both genetic and environmental factors may have on child adjustment, scientists find that the interaction between genetic predisposition and environment seems to be crucial in understanding the variation in children's adjustment in the face of similar levels of environmental risk (Reiss & Leve, 2007; Thaper, Harold, Rice, Langley & O'Donovan, 2007). A genetic predisposition toward aggressive or antisocial behaviour may be expressed in adverse family environments, where for example parenting is harsh and inconsistent, or the level of inter-parental conflict is high, although this predisposition may be minimised when children are raised in positive environments (El-Sheikh & Harger, 2001; El-Sheikh, Harger & Whitson, 2001). Studies employing genetically sensitive designs have indeed shown that the environment in which a child is raised may moderate the expression of a genetic predisposition. For example, Bohman (1996) showed that adopted children who were exposed to environmental risk only (adverse family conditions) had a 6% chance of becoming recidivist criminals in adulthood; those with genetic risk only, demarcated by an antisocial biological parent, had a 12% incidence of criminality. In contrast, those children with a genetic liability who were

exposed to environmental risk had an incidence rate that was much higher, suggesting that an adverse environment may exacerbate an already existing genetic predisposition. Evidence also suggests that exposure to negative life events may increase the propensity of depression in adulthood in those with an existing genetic liability towards developing depression (Cadoret, Cain & Crowe, 1983; Kendler, Kessler, Walters, McClean, Neal & Heath et al., 1995).

A more recent advance has seen the use of molecular genetics to identify particular variants of specific genes that seem to be important in conferring risk for psychopathology. Studies by Caspi, Moffitt and colleagues (2002, 2003) show that variation in the serotonin transporter gene 5-HTT accounted for differences in susceptibility to depression following stressful life events among a sample of young adults, and that the association of childhood maltreatment with antisocial behaviour varied depending on possession of an MAOA gene variant. These studies show that possession of a particular genotype may increase an individual's susceptibility to traumatic environmental stresses, such as exposure to domestic violence, which in turn may contribute to the manifestation of psychological problems. The implication of this work is that children known to carry a genetic liability for psychopathology may represent a priority group who warrant therapeutic intervention, in order to ameliorate ill effects from exposure to environmental risk.

The effects of aversive developmental contexts, such as those marked by inter-parental hostility and high levels of parent-child conflict, may also be communicated to children via disruption to the biological systems that regulate children's responses to stress. As the Caspi study indicates (Caspi et al. 2003) this may also represent a genetic effect whereby the genetic make-up of an individual may render them more

sensitive to the influences of a broad range of adverse social environments, through disruption to biological systems that regulate stress responses.

One neurobiological system that has been identified as particularly important in understanding the aetiology of children's emotional (internalising) and behavioural (externalising) problems is the hypothalamic-pituitary-adrenocorticol axis (HPA; see Gunnar & Quevedo, 2007 for a review). The HPA axis is a system that is critically involved in preserving physical health, as well as mobilising energy stores, promoting vigilance and inhibiting inflammatory responses under conditions of stress and threat (Gunnar, 2003). In evolutionary terms, the heightened vigilance garnered by the activation of the HPA axis, enabled individuals to detect elements of danger within their environments and appraise their meaning quickly. The HPA system produces cortisol, a steroid hormone (Gunnar & Quevedo, 2007). Stress initially causes an increase in cortisol production (Nelson & Carver, 1998) and this plays a substantial role in marshalling physical and psychological resources in response to a stressor. This period of increased activity and cortisol is followed by a decrease in cortisol production, brought about by an inhibitory feedback mechanism. Two types of dysregulation of this mechanism have been identified in the face of chronic or traumatic stress (Margolin & Gordis, 2000). An enhanced negative feedback mechanism leads to a prolonged 'fight or flight' response, which has been associated with increased susceptibility to stress and symptoms of PTSD; also a decreased feedback mechanism is linked to unresponsiveness to stress and depression (Golier & Yehuda, 1998). Both types of dysregulation have been identified in children subject to traumatic experiences (DeBellis, Chrousos, Dorn, Burke & Helmers, 1994; Putnam & Trickett, 1997; Saltzman, Holden & Holahan, 2005). Cortisol production and its role in regulating HPA activity may affect many biological systems. For example,

exposure to acute stressors is associated with a short term up-regulation of the immune system, but prolonged increases in cortisol levels have been shown to depress immunological function (McEwen, 1998). Further, evidence from neuroimaging studies suggests morphologic and functional changes in brain structures involved in the control of the stress response in children suffering from depression and anxiety. It is suggested that these changes may, in part, be long-term consequences of overexposure to glucocorticoid, regulated by the HPA axis, which may result in cell atrophy and loss in these specific regions (Dumna & Charney, 1999).

This evidence suggests that adverse family conditions may exert effects on children by impinging directly on their biological functioning, or by interacting with genetic risk to increase the chances of disorder. The interaction of genetic and environmental risk may also increase the likelihood of biological dysfunction, which then communicates effects to children (Barr, et al., 2004; Caspi, et al.2002; Sanchez et al., 2005). This, along with the social cognitive literature presented above delineates several routes through which risky family contexts, such as those marked by high levels of inter-parental conflict and violence, may influence children's well being.

Cognition as a filter through which environmental, biological and genetic factors influence children

Van Goozen, Fairchild, Snoek & Harold (2006) propose that in particular, the effect of environmental risk on children's behavioural outputs is mediated by neurobiological deficits and disinhibited emotional and cognitive functioning. Genetic factors are seen as a source of familial influence on children's neurobiological, cognitive and emotional functioning, whereby they may exert direct effects (Rutter & Silberg, 2002) on intermediary processes, or where an individual's genetic makeup interacts with exposure to adversity to increase the risk of disrupted biological and

psychological processes. In their conceptual model, Van Goozen et al. (2006) propose a transactional interplay between disrupted biology and cognitive and emotional processes, where disrupted biological functioning may exert effects on psychological processing, but also social and psychological experiences may exert actions on the brain by feeding back upon it to modify gene expression and brain structure and function (Cicchetti & Tucker, 1994; Eisenberg, 1995, Kandel, 1998). Cicchetti (2002) describes how new synaptic connections may be formed in areas of the brain in order to handle information relating to events to which an individual is exposed. Thus it is feasible that the brain of a child who is repeatedly exposed to situations that are frightening and threatening to their own and family members' safety may form neural connections that facilitate the faster processing of threat related information. Cicchetti & Tucker (1994) describe how pathological experience may become part of a vicious cycle as the pathology may distort the child's experience, with subsequent alterations in cognition or social interactions causing additional pathological experience and brain pathology.

Significantly, whilst a dynamic interplay between neurobiological and cognitive mechanism is posited, Van Goozen and colleagues (2006) propose that the eventual communication of effects to children's functioning may emanate more from cognitive and emotional problems. Importantly, it is suggested that whilst the direct impact of neurobiological dysfunction on adjustment may be less pronounced, impairment at this level may serve as catalyst for cognitive dysfunction. Cognitive and emotional problems then serve as the gateway through which neurological deficits impact on child adjustment. This model suggests that aberrant biological processes may represent a target for intervention, where restoration of normal functioning may reduce children's problems in the face of exposure to family adversity. However,

research on stress neurobiology is in its relatively early days (Gunnar, Fisher and The Early Experience, Stress and Prevention Network, 2006) and it may be sometime before this work is fully integrated into preventative interventions (Gunnar et al., 2006; Van Goozen et al., 2006). Furthermore, not all children, even those exposed to extremely aversive family circumstances, show evidence of biological dysregulation (Cicchetti & Rogosch, 2001).

The proposition that disrupted cognitive and emotional processes serve as the gateway through which neurobiological deficits impact on children, opens up the possibility that interventions targeting these aspects of functioning may serve to ameliorate children's adjustment difficulties to some degree, whether they evidence signs of biological dysregulation or not, although it is noted children with severe biological dysregulation may respond less well than other children (Van de Weil, Van Goozen, Matthys, Snoek & Van Engeland, 2004). There is even some indication that improvement of the social environment may have a restorative effect on disrupted biological processes. Support for this proposition is conferred by animal models, where some of the neurobiological effects associated with early deprivation in maternal care (Suchecki, Rosenfeld & Levin, 1993; Meaney & Szyf, 2005) may be reversed when animals are placed in complex environments that promote exploration and which expose animals to high levels of social stimulation. In particular, this type of intervention seems to act on the neurobiological mechanisms that determine adult reactivity to novel stimuli and threat cues in adulthood (e.g. Bredy, Humpartzoomian, Cain & Meany, 2003; Francis, Diorio, Plotsky & Meaney, 2002). Intervention to improve children's social environments also seems to impact on the mechanisms governing children's stress responses. For example, a recent study showed that maltreated children placed in enhanced foster care where positive parenting was

encouraged showed improved behavioural adjustment and more normative regulation of the HPA axis, in comparison with children placed in regular foster care settings (Fisher, Gunnar, Chamberlain & Reid, 2000). Interventions based on psychological theories of effect, such as this, may improve to some degree children's biological functioning by serving to reduce ongoing stress in the child's environment and enhancing emotion regulation (Gunnar et al., 2006). This provides some indication, consistent with Van Goozen et al.'s (2006) proposals, that neurobiological deficits and children's emotional problems are mutually influential and that intervention that serves to ameliorate emotional problems may have an associated benefit on biological disruption. With this in mind, interventions that directly target the way in which children process social information may also be a profitable way of reducing children's emotional and behavioural problems that are manifest in aversive family contexts. This may be particularly beneficial based on the possibility that even in families where focus on inter-parental and parenting behaviour has brought about improvements in parenting, children's problems may continue to be maintained by the maladaptive way in which children process social information.

Children's appraisals of inter-parental conflict

As described in Chapter 1, several perspectives have been proposed to explain the role of children's social cognition in mediating the link between parents' marital discord and children's short and long term adjustment. The cognitive contextual framework (Grych & Fincham, 1990) is founded on work centring on adult's responses to stressful experiences described earlier (Lazarus & Folkman, 1984), in that its central premise is that children's initial perceptions of exchanges between parents dictates the level of processing in which they engage and the coping responses that they may generate. Both of these factors determine subsequent levels of

adjustment. At the core of the model is the assumption that the impact of conflict is magnified by particular types of appraisals (Fosco et al., 2007). In particular, work has focussed on exploring the role that children's appraisals of threat and self blame have to play in explaining the impact of inter-parental conflict on children (e.g. Grych et al., 2003).

Threat is considered to be a part of primary processing of the conflict event whereby, consistent with the adult coping literature, the individual appraises the threat or challenge presented by a stressor (Grych & Fincham, 1990). Attributions made with respect to the cause of the conflict are integral to secondary processing. It is thought that children who attribute cause to themselves, are likely to be more distressed by conflict because, consistent with attribution theory, attributing negative events to internal (self), stable (likelihood that the cause will be present in the future) and global factors (extent to which the cause affects other areas of ones life), increases the negative impact of the event (Bradbury & Fincham, 1990; Grych & Fincham, 1990). Conceptually, perceived threat focuses on the children's fears about parents getting hurt, parents separating as a result of conflict and the conflict spilling over to result in hostility directed towards the child. The blame construct on the other hand is concerned with children's perceptions that they are at fault for the occurrence of conflict or that parents believe this to be the case, and the extent to which conflict reflects child related topics.

Links have been documented between particular dimensions of conflict and children's appraisals (e.g., Grych, 1998; Grych & Fincham, 1993). In particular, boys have been found to react to inter-parental quarrelling with appraisals of perceived threat whereas girls are more likely than boys to blame themselves (Cummings, Davies & Simpson, 1994; Kerig, 1998b). Links are also found between appraisals and

children's immediate responses to conflict (Grych, 1998; Grych & Fincham, 1993), and between appraisals and child adjustment (Cummings et al., 1994; Grych & Fincham, 1992; Grych et al., 2003; Kerig, 1998a). Further, differences in the extent to which children feel threatened and to blame for conflict appears to account for differences in the adjustment of children living in the same family. For example, Richmond & Stocker (2003) found that differences in siblings' appraisals of self-blame were correlated with differences in depressed mood and externalising problems. In addition, a later study revealed similar results for sibling pairs exposed to inter-parental violence (Skopp, McDonald, Manke & Jouriles, 2005). Findings relating to the role of gender in moderating this link are less clear cut, with some studies suggesting that self blame plays a more influential role in explaining the emotional responses of girls (Gerard, Buehler, Franck & Anderson, 2005; Grych et al., 2003; Kerig, 1998a; 1998b), whereas others find that the effect of self blame on adjustment is stronger for boys (Dadds, Atkinson, Turner, Blums & Lendich, 1999).

Studies with American, Australian, Canadian and British samples have shown that appraisals mediate, or explain, the association between conflict and adjustment problems, suggesting that the effects of conflict operate through the kinds of appraisals children make in the context of inter-parental conflict (Dadds, et al., 1999; Gerard et al., 2005; Grych et al., 2000; Kerig, 1998a; Grych et al., 2003, McDonald & Grych, 2006). Further, in a recent longitudinal test of the mediating role of appraisals, Grych, Harold and Miles (2003) found that children's appraisals of threat were consistently related to their internalising symptoms, whereas appraisals of blame were more consistently linked to their externalising problems. The findings of this study are particularly notable as the authors controlled for children's earlier symptom levels as well as the stability in children's appraisals of threat and self blame across the one

year time lag. This allowed estimate of the change in children's adjustment problems to be attributed to a change in children's appraisals rather than to the stable nature of either children's symptom levels or their appraisals (Kessler & Greenberg, 1981). A further strength in this study design was that the theoretical model was estimated twice, using both parent and child reports of inter-parental conflict. The results yielded from these tests indicted that the same pattern of relations was found irrespective of whether children or parents reported on conflict, giving greater confidence that the pattern of results was not simply found as a product of using a single rater to report on all theoretical constructs of interest, which may artificially inflate the correlations between constructs (Grych et al., 2003). Collectively, this work indicates that the appraisals that children generate to explain inter-parental conflict may be important determinants of its impact, with children who feel more threatened by and more at fault for parents' conflict demonstrating poorer adjustment.

Exploration of children's appraisals of threat and blame in the context of violent inter-parental relations

In contrast, there has been less exploration of the role of these particular aspects of children's social cognition (perceived threat and self blame) in accounting for the adjustment of children exposed to more severe forms of conflict marked by high levels of hostility and aggression. This is in spite of the fact that these appraisal constructs, as they are articulated by the cognitive contextual framework (Grych & Fincham, 1990), are likely relevant to children's experiences of more extreme forms of inter-parental conflict and can be measured using existing validated measurement instruments (Grych, Seid & Fincham, 1992). The Children's Perceptions of Inter-parental Conflict Scale (CPIC, Grych et al., 1992) is the most commonly employed measurement tool to assess children's appraisals of inter-parental conflict. It is

designed to tap children's schematic representations of conflict rather than their reports of the occurrence of specific behaviours during inter-parental conflicts. For this reason CPIC may be as useful for eliciting children's schematic representations of violent inter-parental relations as it is for eliciting those relating to inter-parental relations marked by normative levels of conflict.

Based on findings demonstrating that normative levels of conflict are found to evoke children's increased appraisals of threat (Grych, Jouriles, Swank, McDonald & Norwood, 2000; Grych et al., 2003; Richmond & Stocker, 2007), it seems highly likely that owing to the risk that violence may pose to parent and child wellbeing, as well as to the integrity of the family, appraisals of threat may be highly salient amongst this group of children. As outlined earlier, repeated exposure to stress may result in dysregulation in the stress response systems as well as extremely high levels of arousal, which may result in children's immediate distress and anxiety (Grych, 1998; El-Sheikh, 1997; Harger & El-Sheikh, 2003; Weber & O'Brien, 1999). Through these mechanisms, children may be rendered more sensitive to subsequent threat and stress, which may in the longer term undermine the capacity to regulate their emotions. Difficulty in regulating emotions is likely to increase the risk for developing symptoms of anxiety, depression and posttraumatic stress disorder (El-Sheikh, 2008; Fosco et al., 2007; Grych et al., 2000; Scheeringa & Zeanah, 1995). Questions contained within the CPIC (Grych et al., 1992) relating to children's appraisals of threat reflect children's fears that conflict will escalate and that they will be drawn into the conflict. Questions such as 'I get scared when my parents argue'; 'When my parents argue I am afraid that something bad will happen' and 'When my parents argue I worry about what will happen to me' seem intuitively relevant to violent contexts, where children have a higher chance of being caught in the crossfire

of parents' hostilities and may be well aware of the potential for, and the rate at which conflicts may spiral out of hand. In turn, high levels of perceived threat may make children's appraisals of their ability to cope more salient (Fosco et al., 2007).

Questions pertaining to coping reflect children's feelings that they can help parents resolve conflicts or successfully employ a strategy to help themselves feel better in the face of conflict. Children respond to statements such as 'When my parents argue I can usually do something to make myself feel better' and 'When my parents' argue I can usually help to make things better'. Whereas children may be capable of responding appropriately to lower levels of parental disagreement children may feel hopeless in the face of highly hostile inter-parental conflict (Grych, 1998; Grych & Fincham, 1990), which may be manifest as increased symptoms of depression. Questions pertaining to threat and children's coping efficacy are usually combined to derive an overall index of threat owing to the high degree of relatedness between scales, although recently the suggestion has been raised that these scales may be better considered separately when exploring the appraisals of children exposed to violence (Fosco et al., 2007). Further, Fosco et al. (2007) questions the conceptual meaning of threat across normative and non normative contexts, in that threat in non violent households may relate to children's fears for the integrity of the family and the emotional wellbeing of parents, whereas children's appraisals of threat evoked by domestic violence may centre on the physical well being of parents, even extending to fears for their own or parents' lives in extreme circumstances. Scheeringa & Zeanah (1995) found that for children under five years of age, threat to the mother figure led to more symptoms of aggression, fear and hyper-arousal than exposure to other types of trauma, suggesting that fear for the safety of an attachment figure has a profound impact on children's behavioural and emotional health. Thus, it might be expected

that appraisals reflecting these types of fears may be strongly related to a broad range of children's adjustment problems, although presently this qualitative difference is not adequately addressed by the CPIC (Grych et al., 1992).

Children's ability to understand why a conflictual exchange is occurring may guide their behavioural response and may also be drawn upon to predict when a similar situation may arise in the future (Grych & Fincham, 1990). Children exposed to child related conflict are known to experience a greater sense of self blame (Grych & Fincham, 1993) and this may be particularly so where conflict results in parents' aggression or when children fear that this will be the case. Indeed, child related issues are often topics that culminate in episodes of violence (e.g. Edelson, Eisikovits, Guttman & Sela-Amit, 1991; Straus, Gelles & Steinmetz, 1980). In examining data collected from police records across five US states, Fantuzzo, Boruch, Beriama, Atkins & Marcus (1997) found that in 20% of households in which domestic violence occurred, an issue pertaining to children was identified as being an influence in a violent episode. Children who feel that they are in some way responsible for parents' arguments may feel a sense of greater agency and may be more likely to intervene in their parents' disputes (Schermerhorn, Cummings & Davies, 2005). Children tend to favour direct intervention strategies (Adamson & Thompson, 1998; Jenkins, Smith & Graham, 1989) and may be more likely to intervene as the severity of conflict increases (Davis et al., 1998; Jenkins et al., 1989). Children previously exposed to inter-parental violence may be especially likely to involve themselves, with Adamson and Thompson (1998) finding that previously exposed children were eight times more likely to report direct intervention strategies in the face of simulated inter-parental aggression. Whilst the propensity to become involved in parents' normative levels of conflict has been shown to have some short term benefits (Schermerhorn, Cummings,

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DeCarlo & Davies, 2007), available evidence suggests that over-involvement in inter-parental conflict is associated with psychological distress, over and above the effects of the frequency and intensity of the conflict (Jenkins et al., 1989). Involvement in parents' violent exchanges however may be at best ineffective and at worst, may result in an escalation in the situation and/or injury to the child (Adamson & Thompson, 1998). That children's appraisals of blame may activate attempts to intervene in their parents' disputes, may give some explanation of the link between children's appraisals of blame and children's externalising problems (Grych et al., 2003). In the initial development of the scale, Grych et al. (1992) found questions relating to children's sense of blame such as 'It is usually my fault when my parents argue' and those relating to the extent that conflict is child related, were highly correlated, therefore they are combined to represent an overall index of the extent to which children feel at fault for causing parental disagreement.

Nevertheless, it is conjectured that in chronically violent homes, children may be less likely to blame themselves for the occurrence of violence. Perhaps due to the nature of parents' behaviour, blame is easier to locate with the perpetrating parent or even the victimised parent (Grych, 1998; Grych et al., 2000; Mullender et al., 2002). In this vein, several studies have shown that children exposed to high levels of conflict are more likely to attribute blame to parents than children exposed to lower levels (Grych, 1998; Weber & O'Brien, 1999), and particularly to fathers (Grych, 1998). On the other hand, children from this particular family context may be more likely to assume blame for failing to protect the victimised parent (Fosco et al., 2007). It is suggested that the perception of being responsible for preventing or ending violence may be more likely to elicit feelings of helplessness that are associated with internalising symptoms (Bolger & Patterson, 2001; Fosco et al., 2007; Patenaude,

2000). The questions contained in the Self Blame subscale of the CPIC do not adequately capture this facet of children's sense of responsibility, although this theme is reflected to some extent in the coping subscale used to index appraisals of threat, for example, 'When my parents argue or disagree I can usually help make things better', serving to underscore the argument that coping may be best considered as a unique predictor of children's adjustment.

At the core of this thesis is consideration of perspectives developed to explain child adjustment in the context of normative levels of inter-parental conflict, and the way in which these may be applied to understand children's psychological adaptation in the context of non-normative levels of conflict. This analysis of the specific types of appraisals that may be engendered by non-violent conflict suggests that similar appraisals may also be evoked by exposure to parents' violent conflict. This in turn suggests that focussing on children's attempts to understand parents' violent exchanges, specifically the degree of threat that is posed and the extent to which the child implicates themselves as the cause of conflict, may be a fruitful avenue of enquiry. In doing this it may be possible to better understand why, in the face of inter-parental violence, some children continue to function well, whilst the functioning of others is severely impaired (Grych et al., 2000).

The role of age in determining children's understanding of family relationships

As described in Chapter 1, Grych and Fincham (1990) draw attention to the contextual factors that create a backdrop against which inter-parental behaviour is evaluated. In particular, children's age may be an important factor to consider in understanding the meaning they are able to derive from conflicted and violent inter-parental exchanges. Children's cognitive abilities are known to become increasingly sophisticated over time (McDonald & Grych, 2006; Smetana, Campione-Barr &

Metzger, 2006; Spear, 2000), with an important shift in ability occurring as children move from concrete to formal operational thinking (Piaget, 1970). This occurs at about the time at which children transition into adolescence, thus, there may be marked differences in the way that children and adolescents appraise family relationships.

A key difference between concrete and formal operational thought is the degree to which it is egocentric. As children move into the concrete operational stage they begin to demonstrate the ability to think about a perspective other than their own, but whilst children aged between 7 and 11 years show much more awareness of others divergent perspectives, they may still respond egocentrically at times, failing to separate their own viewpoint from that of another (Piaget, 1970). A further key difference between concrete and formal operational thinkers is that whilst children in the former stage may be able to think about a problem logically and systematically, this is only the case for as long as thinking relates to tangible objects that are or which have been present (Piaget. 1964a, p.62.). In contrast, formal operational thinkers are able to think logically about hypothetical situations that may have no basis in reality. This enables older children to think more easily about abstract concepts such as personality characteristics (Barenboim, 1981). This change in thinking may have implications in turn for children's ability to engage in causal reasoning. Concrete operational thinkers, particularly those at the beginning or middle of the stage, may show a propensity to attribute cause for an event or exchange to observable behaviours (Grych & Fincham, 1990). Formal operational thinkers on the otherhand are able to locate cause to internal and stable dispositions of a person (Boxer & Tiask, 2003; Shantz, 1983). Older children's ability to engage in more complex causal reasoning, along with their ability to make psychological comparisons, may facilitate

more accurate understanding of who is to blame for an event, even if the cause is not immediately obvious or is couched in the behavioural actions of another (Grych & Fincham, 1990).

Children's ability to discriminate between their own perspectives and those of others, coupled with understanding that internal factors may account for behaviour, also means that adolescents become more adept at *social* perspective taking (Selman, 1980; Yeates & Selman, 1989). As children acquire role taking skills the understanding of relationships begins to change (Shaffer, 1996). Selman (1980) proposed five stages of development in social perspective taking. Like Piaget, Selman posits that children progress from stage to stage in a sequential order. Selman's final three stages span late childhood and adolescence. Children in late childhood, which roughly corresponds to the late stages of concrete operational thinking, are thought to be aware that people's perspectives may differ, recognising that others are able to put themselves in their shoes, and therefore enabling them to anticipate a person's reactions to their behaviour. However, a child at this 'self reflective' stage is unable to consider simultaneously his own perspective and that of another. The fourth stage, termed 'mutual role taking' sees children able to simultaneously consider their own, as well as another's view point, and also assume the role of a third party in order to anticipate how both persons will respond. Finally, the 'societal role taking' stage sees the adolescent attempt to understand another view point by comparing it with that of the social system in which he or she operates. In considering the role taking abilities of children in late childhood and early adolescence, Keating and Clark (1980) found that in the space of just a few years, children's abilities changed dramatically. Forty percent of children in late childhood were found to demonstrate role taking abilities commensurate with the self reflective stage, whilst 40% showed evidence of mutual

role taking and 10% of societal role taking. By early adolescence however, a much higher proportion of children demonstrated mutual role taking (65%), and few remained at the self reflective stage. By this point nearly a quarter were demonstrating the most sophisticated level of role taking. Berndt and Perry (1990) suggest that at these higher levels of functioning, children's notions of relationships expand to emphasise the exchange of intimate thoughts and feelings, loyalty and support.

These changes in social cognitive ability seem to play out in the way that children derive meaning from family exchanges. Older children seem to have a more sophisticated understanding of some of the complex dynamics associated with conflictual exchanges. For example, seven year old children understood that triangulation of a child in conflict occurring between parents could have negative implications for both the parent-child and the spousal relationship, which was not the case for children aged 5 (Jenkins & Buccioni, 2000). As a function of their greater understanding of this negative dynamic, older children may find a parent's attempts to form alliances during spousal conflict as more distressing than younger children, who may be more willing to take sides (Jenkins & Buccioni, 2000). On the otherhand, older children's understanding of their impact on conflict is likely to explain the greater level of involvement in parental disputes, promoted by the belief that they may be able to alter its course. The role of age in relation to children's understanding of the causes and consequences of conflict has also been documented in recent years. Studies show that younger children tend to make more child blaming attributions for the causes of inter-parental conflict (Grych 1998), as well as feel more threatened by disputes between parents (Jouriles et al., 2000), although older children's cognitions have been shown to be more closely related to adjustment (Jouriles et al., 2000). Further, younger children may be less able to make the distinction between spousal

and parent roles (Jenkins & Buccioni, 2000) with understanding of the distinctiveness of these roles becoming more differentiated over time (Bretherton, Prentiss & Ridgeway, 1990; Fu, Goodwin, Sporakowki, & Hinkle, 1987). This cognitive limitation may be linked to younger children's propensity to attribute blame for conflict to themselves in that they by default interpret a parent's anger to be related to parental rather than spousal issues, and thus infer that they are in some way blameworthy.

Children's understanding of the family wide effects of inter-parental conflict

The cognitive contextual framework (Grych & Fincham, 1990) provides a useful heuristic for understanding how conflict and violence may influence children's short and longer-term responses to inter-parental conflict. Empirical work described here underscores the specific role of appraisals as a determining feature of children's symptoms of psychological distress as a result of exposure to inter-parental conflict. Specifically when children perceive threat they manifest symptoms of anxiety, depression and withdrawal, and when they perceive they are at fault for or to blame for parents' arguments, they are more likely to act out in a violent and hostile manner. Analysis of these appraisal constructs and the way they are measured reveals that they may also be useful in explaining the process through which more extreme forms of inter-parental conflict impacts on children. In addition, Grych and Fincham's (1990) framework is valuable in highlighting contextual factors, such as age, that may shape children's understanding of inter-parental conflict. Nevertheless, the proposals of the cognitive contextual framework (Grych & Fincham, 1990) relate specifically to children's social cognitions about the inter-parental relationship and little consideration is given over to the role that children's understanding of other family relationships may play in the process by which conflict affects children. Neither does

this perspective consider how children's appraisals of the inter-parental relationship may shape children's appraisals or representations of other family relationships. As described earlier in Chapter 2, a family systems perspective (Cox & Paley, 1997, 2003) emphasises the part that dysfunction across *multiple* family relationships may play in determining children's adjustment in the context of a stressed family system. Further, the literature described at the beginning of this chapter describes how children may hold schemas that organise their knowledge, beliefs and expectations relating to a particular subject. Grych and Cardoza-Fernades (2001) propose that children's schemas for inter-parental conflict exist in a complex network of representations about the family as a whole (Grych & Cardoza-Fernades, 2001), and thus the scripts that children develop to understand events in the inter-parental relationship may be applied to abstract meaning from parent-child exchanges. With this in mind children's appraisals of inter-parental hostility may be likely to invoke similarly negative evaluations of the parent–child relationship. Greater understanding of the way in which children's evaluations of the quality of inter-parental and parent-child relationships are linked, may elucidate a mechanism through which multiple family relationships contribute to children's psychological well being in the context of conflicted and violent inter-parental relations. Enquiry in to these questions provides the focus of the following chapters. Specifically, Chapters 4 and 5 consider the linkages between children's appraisals of threat and self blame and children's appraisals of parent-child relationship quality and how, together, children's understanding of these primary family relationships may explain their psychological adaptation in the context of family environments marked by normative and non normative levels of inter-parental conflict.

Chapter 4

This chapter contains two interlocking studies, each of which seeks to examine the nature of the relationships between children's awareness or perception of inter-parental conflict, children's appraisals of threat and self blame and parent-child relationship quality, and children's internalising symptoms and externalising problems. Using a longitudinal design, Study 1 examines the role of children's appraisals of threat, self blame and parent-child relationship quality in mediating the link between children's awareness of conflict and their later internalising and externalising problems. As well as examining this process amongst the full sample of children, separate analyses are performed across low and high conflict groups in order to explore possible variation in these relationships as a function of the severity of conflict to which children are exposed. Next, given the paucity of work that explores the role of younger children's appraisals as a mechanism through which inter-parental conflict may undermine psychological adaptation, and the shifts in cognitive capability that occur at around the transition to adolescence, Study 2 moves to test this theoretical model using a preadolescent sample of children in order to examine whether the pattern of findings observed in Study 1 extend to younger children.

The studies are presented separately, each with their own discussion of findings. This is followed by an integrated overview and conclusion, as well as a consideration of the study limitations. The significance of these results is considered in terms of the implications they hold for prevention and intervention initiatives. Finally, in returning to the core focus of this thesis, the value of these results is considered with respect to the light they cast on the processes that may underpin children's development in families marked by high levels of hostility and violence

Study 1

<u>Introduction</u>

The previous chapter considered in detail, the role that children's appraisal of inter-parental conflict may play in explaining variation in children's adaptation in the context of normative levels of conflict. It further reviewed the utility of theoretical perspectives emphasising children's cognitive processes to understanding the link between exposure to parents' violent conflict and child adjustment. Chapter 2, in contrast served to underscore the role that disrupted parenting processes may play in explaining the impact of inter-parental conflict and violence, as well as broader sources of risk, on children's functioning. Whilst these accounts have generally been conceived of as competing hypotheses, this chapter sets out to examine how the proposals of both models might be integrated to provide a more comprehensive account of the processes through which children are affected by inter-parental conflict and violence. Few studies have evaluated the relative role of these mechanisms when considered together and fewer still have done so within the context of a longitudinal research design. In order to address this gap in the literature, the analyses included in this chapter expressly test the role that children's appraisals of inter-parental conflict play, as well as that of the quality of parent-child relations, in explaining how children's awareness of conflict may impact on their emotional and behavioural functioning. Further, in a step towards understanding the utility of such an integrated account in explaining variation in children's adjustment in very hostile family settings, this study uses a community sample of children to examine if and how this process might vary according to the severity of conflict to which children are exposed.

An integrated account of the effects of inter-parental conflict on children

As described in Chapter 1, Harold and his colleagues (Harold & Conger, 1997; Harold et al, 1997) propose a family wide model where marital conflict leads to parents' increased hostility towards children and children's awareness that inter-parental conflict is occurring. The cornerstone of the model however, is the proposal that both parent-child hostility and inter-parental hostility contribute uniquely to children's perceptions of parent-child relations. Children's perception that parents' hostility is directed towards them is then proposed to increase the likelihood of adjustment problems. The model broadens the indirect effects model by adding a cognitive component in contending that children's *perceptions* of parental mistreatment, rather than parenting behaviour itself, is important for understanding adjustment. Further, it specifies that children's perceptions of parent-child relations will be shaped both by parents' behaviour towards them and towards each other. The proposed ordering of the cognitive components of the model suggests that children's perception of inter-parental conflict precedes and thus in part determines children's perception of the parent-child relationship.

Children's perceptions of parent-child hostility may be influenced by inter-parental behaviour for several reasons. First, evidence of a spill over of hostility from the inter-parental, to the parent-child dyad (Erel & Burman, 1995) suggests that children may realistically appraise that hostility expressed between parents, will not just be confined to the inter-parental relationship, but will also initiate parents' hostilities towards them. Additionally, children who witness hostile exchanges between parents may feel less secure in their own relationship with their parents (Davies & Cummings, 1994). In particular, witnessing parents' frightening or frightened behaviour during bouts of destructive conflict may compromise children's

confidence in parents as a source of security and protection (Finkelhor & Dzuiba-Leatherman, 1994; Owen & Cox, 1997). Therefore, children's perception of the parent-child relationship may be affected by awareness of inter-parental conflict, even in the absence of objective evidence of diminished parent-child relations. Further, children sensitised by exposure to marital hostility, may exhibit a generalised pattern of dysregulated emotional, behavioural and cognitive responses, which may magnify the effects of other types of conflict such as that between parents and children, as well as that occurring between parents alone (Davies & Cummings, 1994). In essence, the family wide model portends that children's appraisals of the inter-parental relationship serve as the architect of children's appraisals of other family relationships and that in particular the marital relationship provides the backdrop against which the parent-child relationship is appraised (Harold et al, 1997).

In an empirical test of this model using an adolescent sample, Harold and Conger (1997) found that parent-reported and observer-rated marital conflict predicted both parent hostility and adolescent awareness of conflict frequency one year later. As proposed, both parent behaviour towards the adolescent and the adolescents' perception of inter-parental behaviour, accounted for unique variance in children's concurrent perceptions of parent hostility. Perception of parent to child hostility, in turn communicated effects to children's later internalising symptoms and boys' externalising behaviour, indicating that perceptions of the parent-child relationship mediated the effect of actual parent behaviour and adolescent awareness of conflict on children's adjustment. Harold and Conger (1997) propose that the gender difference relating to externalising problems, may be due to the fact that girls are more shielded from inter-parental conflict (Cummings et al., 1994; Grych & Fincham, 1990). The discrepancy in findings may also be explained in terms of the

ways in which girls and boys are socialised to display their feelings of distress, with boys displays of overt aggression being more acceptable to parents, whilst girls are encouraged to show their distress in ways more consistent with internalising symptoms (Davies & Lindsay, 2001).

A second test of the model revealed similar findings in that adolescent awareness of inter-parental conflict and perceptions of parent-child hostility jointly communicated effects of marital conflict to both concurrent levels of adjustment and adjustment assessed one year later (Harold et al, 1997), although boys' later externalising problems proved an exception to this rule, only being accounted for by previous problems. Further, this model also accounted for the possibility that marital conflict may continue to exert direct effects on adjustment through awareness of conflict frequency, although it was found that the direct effects of marital conflict on adjustment were limited to boys' concurrent internalising symptoms. This gender difference is in keeping with that of the previous study and suggests that boys may be more affected by negative family relationships than girls (Emery & O'Leary, 1982). Overall, these results support the notion that marital conflict initiates a chain of events, where a set of processes are set in motion that increase the risk for children's adjustment problems (Harold & Conger, 1997).

More recent support for the conception that children's appraisals of conflict in multiple family subsystems are important in accounting for children's adjustment problems has been yielded in a family wide test of the emotional security hypothesis. Using a longitudinal design, where initial symptom levels were controlled for, Harold et al. (2004) found that marital discord predicted each of the latent indicators of emotional security (emotional regulation, cognitive representations & behavioural regulation), assessed by children's responses to analogue presentations of inter-

parental conflict. Children's cognitive representations of the marital relationship (how much children thought problems had been worked out and the possibility that the same problem would recur) and children's emotional regulation efforts (the emotions induced by analogue presentations of conflict) were associated with children's emotional security about parenting one year later, which in turn predicted concurrent internalising and externalising problems. That this set of results derived specifically from an emotional security perspective supported the notion of a family wide model, suggests that the 'chain of events' first described by Harold et al (1997) is a robust effect that holds across different operationalisations of constructs as well as samples. Further, this test of the family wide model gives some indication that the meaning that children attach to conflict, may serve as an 'emotional primer' of their evaluations of the quality of parent-child relations (Harold et al, 2004). In contrast, Harold's earlier longitudinal tests of the family wide model focussed on children's *awareness* of conflict frequency. Frequent conflict per se may not pose a risk to children's psychological health, instead adjustment may be more closely linked with the way that the conflict is managed, either constructively or destructively and thus, it is possible that frequent disagreement may also be handled in a way that does not evoke children's distress. Greater attention is needed therefore to understand how children's appraisals of one relationship may be emotionally primed by events occurring in another. The family wide test of emotional security represents an important step towards this end by indicating that both children's cognitions and emotions induced by inter-parental conflict may inform the way in which they think about parent-child relations. Nevertheless, parents' reports of marital conflict were assessed in this study. Evidence suggests that parents' and children's accounts of inter-parental conflict may diverge (e.g. Grych et al, 1992; Kitzmann & Cohen, 2003) and theory, discussed

extensively in Chapter 3, would suggest that the relationship between children's own awareness of destructively managed conflict and the meaning that this has for them is particularly important to assess in attempting to understand the commonality across children's appraisals of multiple family relationships (Davies & Cummings, 1994; Grych & Fincham, 1990).

Harold and colleagues (1997) articulated that in particular, the level of threat that exposure to inter-parental conflict inherently poses to children may serve to influence children's appraisals of parent behaviour. With this in mind, recent work that has highlighted the role of children's appraisals of threat and self blame in accounting for children's adjustment (Grych et al, 2003; Richmond & Stocker, 2007) may usefully be integrated into a family wide framework. As of yet, there are few studies which test longitudinally, the way in which children's appraisals of threat and blame emanating from inter-parental conflict serve to shape children's interpretations of parent-child interactions and further, how these appraisals together might influence adjustment. Several studies have however, considered the relative role of children's appraisals of threat and/or blame against parenting processes as a mechanism through which conflict affects children. Stocker et al (2003) found that the link between marital conflict and children's internalising symptoms was mediated by children's appraisals of threat, self blame and parenting processes, whereas children's externalising problems were accounted for, indirectly, through a combined measure of children's and observer reports of parent negativity. A further study has found that when assessed simultaneously, only children's self blame attributions for parents' marital arguments, and not appraisals of negative parenting linked inter-parental conflict to children's academic attainment, measured two years later (Harold et al, 2007). However, as this is one of the first studies of its kind, it is not clear whether

appraisals of self blame serve as a particularly potent predictor of children's adjustment, even when appraisals of parenting are considered, or whether this finding is specific with relation to academic achievement and not of broader indices of child functioning. This is addressed in part by a recent study undertaken by Walters et al (2008) where the role of both threat and self blame appraisals and those relating to parent-child relationship quality were considered as mechanisms through which inter-parental conflict affected children's internalising and externalising problems. In a sample of children aged between 9-11 years it was found that appraisals of threat, blame and parenting served to link awareness of conflict to internalising, whilst appraisals of parenting, partially accounted for the link between conflict and externalising; a different pattern of effects found than when academic attainment was considered as the outcome of interest. It should be noted however, that the latter findings were derived using a younger of sample of children, which may account for the salience of the parent-child relationship in communicating effects to children (Furman & Buhrmester, 1992; Nikerson & Nagle, 2005).

Whilst all three of these studies consider the unique contribution that direct and indirect processes make in explaining children's adjustment in the context of inter-parental conflict, neither specify the theoretical direction of relations between children's appraisals relating to the inter-parental relationship and those pertaining to parenting, as did Harold's earlier work (Harold & Conger, 1997; Harold et al, 1997). The review of work relating to children's schematic representations of relationships, presented in Chapter 3, suggests that representations of the inter-parental relationship may be drawn upon to guide children's expectations of other family relationships (Grych & Cardoza-Fernades, 2001). Further, children psychologically and physiologically sensitised to inter-parental conflict may respond more negatively to

expressions of hostility or negativity in the parent-child relationship (Cummings & Davies, 1994; El-Sheikh, Ballard & Cummings, 1994; El-Sheikh, 1997; Gunnar & Quevedo, 2007). It seems plausible therefore, that conflict which engenders high levels of threat and self blame may be particularly likely to evoke negative appraisals of the parent-child relationship. As has already been highlighted, children who feel threatened in the context of inter-parental conflict may feel so, owing to the belief that they may be the target of hostile parental behaviour. However, children's appraisals of threat may also stem from anxiety about the stability of the family, which may orientate children's need to reaffirm attachment bonds with parents. This may in turn render children more sensitive to perceived negativity in the parent-child relationship (Fauber et al, 1990). Self blame may also serve as an important contextual factor in the way in which the quality of parent-child relations is perceived. Children who feel to blame for causing ill feeling between parents may be particularly likely to expect negative ramifications in the parent-child relationship, either in the shape of increased hostility or in the form of parents' withdrawal. Specification of the intermediary variables that link children's awareness of conflict to their appraisals of parent-child relations, may give a greater insight into the mechanism that underpins the role of inter-parental conflict in shaping children's expectations about other family relationships (Grych & Cardoza-Fernades, 2001). This, in turn, may give a more comprehensive account of the role that children's evaluations of multiple relationships may play in determining psychological adaptation in the context of inter-parental conflict.

Using community data to explore the process explaining children's psychological adaptation in hostile family contexts

The lack of process-orientated accounts relating to children's adjustment in the context of violent inter-parental relations was highlighted at the very outset of this thesis. Indeed, this paucity of work underpins the core aim of this thesis, which is to consider the utility of generalising existing theoretical perspectives developed to explain the impact of normative levels of conflict on children, to more hostile family contexts. Therefore it comes as no surprise that to date, lacking from the different accounts of the family wide model reviewed here, is exploration of if and how this process may vary according to the level of hostility that children perceive as occurring between parents. It is conceivable that the strength of the relationship between appraisals of conflict and parenting may be stronger in high conflict samples owing to the heightened emotional priming observed amongst children exposed to particularly hostile forms of marital conflict (El-Sheikh, 1997; Grych, 1998; Weber & O'Brien, 1999). Further, the greater degree of sensitisation exhibited by children exposed to inter-parental violence may undermine their capacity to regulate affect, which in turn may render them more likely to develop adjustment difficulties. For this reason, in high conflict homes, children's awareness and appraisal of inter-parental conflict may be more likely to exert a direct effect on adjustment, over and above any indirect pathway through the joint effect of children's appraisals of conflict and the parent-child relationship. Alternatively, the very real threat of parent-child directed hostility in violent homes (Appel & Holden, 1998) may mean that effects are communicated only through children's appraisals of parenting.

As outlined in Chapter 1, few studies in general have attempted to disentangle the processes through which conflict of differing degrees of severity has its effect on

children's adjustment. Instead, studies tend to use a broad conceptualisation of inter-parental conflict that ranges from children's perceptions of constructively managed events through to children's awareness of extreme expressions of hostility. This homogenisation of children's experience is at odds with work that demonstrates that children's exposure to behaviours at either end of the continuum of conflict evokes very different emotional and behavioural reactions (Goeke-Morey et al, 2003). Thus, there may be difficulties in attempting to abstract meaning from studies focusing on the broad spectrum of inter-parental conflict with respect to processes explaining children's adjustment in the context of extremely hostile inter-parental relations. The benefits of a more fine-grained analysis of the processes which operate to explain children's adjustment in the context of conflict located at different points along the continuum of inter-parental behaviour are twofold. First, greater understanding of possible variation in process as a function of normative variation in conflict will aid those working to ameliorate child problems to tailor their interventions based on a child's experience and the likely sequence of events that is set in motion. Second, the identification of particular processes that explain children's adjustment in the face of hostile, but non violent conflict, may allow researchers to generate more informed hypotheses regarding the mechanisms through which violent inter-parental conflict may impact on children. Whilst it is acknowledged that the use of community data in this way may not directly address the functional role of a particular mechanism in non-normative family contexts, it represents an example of how community sourced data can be used as a first step towards understanding how theoretical perspectives developed with inter-parental conflict in mind might generalise to explain the impact of domestic violence on children. As tests of the family wide model have not yet been undertaken amongst samples of children and families experiencing domestic violence,

little is known about the way in which children's appraisals of multiple family relationships may act together to communicate effects of inter-parental violence to children. Thus, it is a useful exercise to compare the processes underpinning adjustment in the context of low and high inter-parental conflict using a community sample of children

The present study

Building on previous work, which indicates that both children's awareness of conflict and appraisals of parent-child relations are important aspects of the process through which inter-parental conflict exerts adverse effects of adjustment outcomes (Harold & Conger, 1997; Harold et al, 1997; Harold et al, 2004), this study sought to explore linkages between children's awareness and appraisal of inter-parental conflict, their evaluation of parent-child relationship quality and children's adjustment. Specifically, using a two wave longitudinal design and data collected from 315 Welsh school children and their teachers, this study examined the role that children's appraisals of threat and blame and quality of parent-child communication play in explaining how children's awareness of frequent, intense and poorly resolved conflict impacts on both internalising and externalising. Based on previous research, the conceptual model presented in Figure 1 proposes that conflict which is frequent, intense and poorly resolved will be associated with children's appraisals of threat and self blame one year later (Grych et al, 2003). In line with work suggesting links between children's appraisals of inter-parental conflict and parent-child relations (Harold et al, 1997; Harold et al, 2004), it was predicted that appraisals of threat and self blame would be related to children's evaluation of less positive parent-child communication. Parenting in turn, was predicted to be related to adjustment. In line with the family wide model it was expected that the effects of children's appraisals of

inter-parental conflict on children would be mediated by children's appraisals of parent child relationship quality (Harold & Conger, 1997; Harold et al, 1997).

In order to examine the variation in this proposed process as a function of the severity of inter-parental conflict, low and high conflict groups were created using a median split based on children's reports of inter-parental conflict. It was expected that across both low and high conflict groups, children's perceptions relating to the destructiveness of inter-parental conflict would be related to children's later appraisals of inter-parental conflict, which in turn would be related to evaluations of the quality of parent-child communication. Appraisals of parent-child relations were then expected to be associated with internalising and externalising problems. Additionally, in relation to the high conflict group, it was anticipated that perceptions of conflict would exert direct effects on adjustment through appraisals of threat and blame over and above the joint effect through appraisals of inter-parental conflict and parent-child relationship quality. In line with previous research it was expected that threat would be related to internalising and blame to externalising (Dadds et al, 1999; Grych et al, 2003; Buehler, Lange & Franck, 2007).
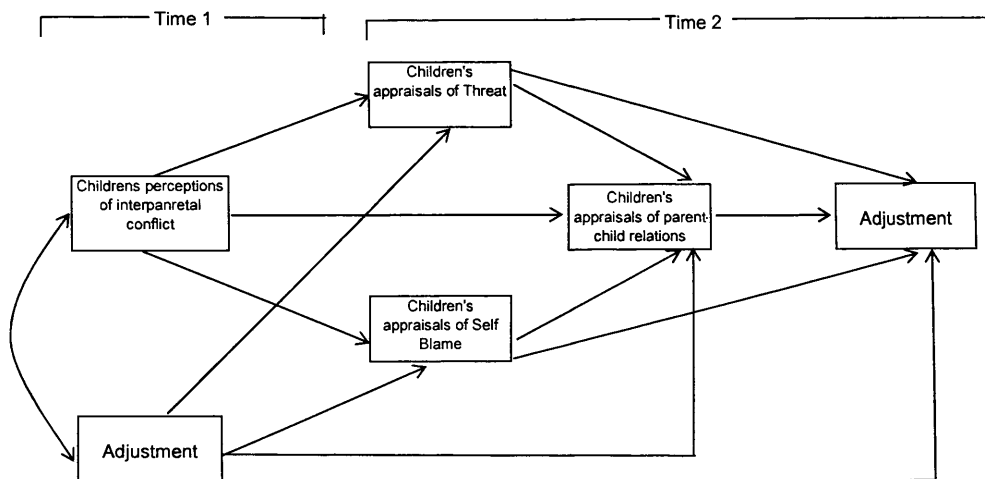
Figure 1. Theoretical model of the relationship between adolescent perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and adjustment

Method

Sample

These data derive from a three year longitudinal sample of more than 500 children living in South Wales in the UK, whose parents provided written consent for them to participate in a study focusing on the relationship between children's family experiences and their socio-emotional development. Demographic information suggests that the sample is representative of British families living in England and Wales with respect to family constitution, ethnic representation and parent education (Social Trends, 2002). Of the children participating in the study, 389 parents successfully completed and returned questionnaires during the first year (72% parental response rate). Of the families who provided complete questionnaire information at Time 1 (1999), 82% also provided complete information at Time 2 (2001). Preliminary analyses indicated that the families who completed measures at all points did not differ significantly from families who participated in the first or second years of the study only across any of the primary measures.

The present study uses data collected from 315 children and their teachers who had complete information across all study variables of interest at both time points (1999 and 2000). Given the nature of the study questions, only information pertaining to two parent families was included in the analyses. Families were comprised of a female and male guardian and at least one of these adults was the child's biological parent. The sample was comprised, in large part, of families containing both biological parents (91 %); 8% of families comprised a mother and stepfather and 1% of families were father and stepmother combinations. 98% of the sample was of British origin whilst the remaining 2% were of non-British origin. Children were aged between 11-13 years old, with a mean age at Time 1 of 11.7 years (SD=0.47; girls=52%; boys =48%).

High and low conflict groups were created by performing a median split on these data, based on children's reports of inter-parental conflict. The low conflict group was comprised of 166 cases (girls = 47%, boys = 53%; $\underline{M}$= 11.7 years; SD=0.46) and the high conflict group was comprised of 149 cases (girls= 57%, boys = 43%; $\underline{M}$= 11.7 years; SD=0.48). Groups did not vary across family composition (low: 92% both biological parents, 8% step-parent family; High: both biological parents 89%, step parent family 11%) nor across ethnicity (low: 98% British; 2% non British origin; High: 97% British, 3% non British).

Procedure

After receiving permission from area schools to conduct the study, parents were contacted by letter inviting them to participate in a research project focusing on the link between family life and children's psychological well-being. Participating children completed questionnaires during the course of the school day. Questionnaires contained measures relating to family interaction, parent-child relations, inter-parental

conflict, psychological health and family economics. Children sat apart from one another while the confidential nature of the study was explained. They were asked to answer questions relating to the interadult relationship and the parent-child relationship for those parents (or guardians) that they lived with. As part of an overall debriefing, children and researchers discussed the benefits of successfully negotiating conflicts between individuals. Children were encouraged to speak about how they felt following their completion of the questionnaires. No concerns were raised.

Teachers also completed questionnaires assessing children's psychological functioning. Parents were sent questionnaires in the mail, including separate envelopes for each respondent, instruction for completion and a prepaid return envelope. Parents' questionnaires contained measures of conflict occurring between parents, parenting, parent and child psychological health and economic conditions. No payment was made to families, but parents were informed that a summary booklet outlining key research findings would be distributed to all families on the completion of the study.

Measures

Children's perceptions of inter-parental conflict:

The conflict properties subscale of the Children's Perception of Inter-parental Conflict subscale (CPIC, Grych et al, 1992) was used to assess children's reports of inter-parental conflict. The subscale includes 17 items indicating the frequency, intensity and resolution of inter-parental conflict. It includes statements such as "I never see my parents arguing" (frequency) "my parents get really angry when they argue" (intensity); "even after my parents stop arguing they stay mad at each other (resolution)". Response options are *"true"*, *"sort of true"* and *"false"*. Items were recoded so that higher scores on the scale indicated conflict that was more frequent,

intense and poorly resolved. The internal consistency score for this subscale was good (α=.91).

Appraisals of threat and self blame:

Adolescent appraisals of threat and self blame were assessed using the perceived threat and self blame subscales of the CPIC (Grych et al, 1992). Twelve items comprise the Threat sub-scale which includes items indexing the child's worries about the implications of the conflict and confidence in their ability to cope with conflicts for example "when my parents argue I worry what will happen to me" (threat) and "when my parents argue I can do something to make myself feel better" (coping). One item, "when my parents argue I worry one of them will get hurt", was omitted due to concerns raised during the process of receiving ethical approval. The nine item Self Blame sub-scale assesses the degree to which children blame themselves for their parents' conflict and perceive conflicts as concerning child-related issues. Items include "it is usually my fault when my parents argue" (self blame) and "my parents usually argue or disagree because of things I do" Both measures derived good internal consistency estimates (Threat, α=.88; Blame, α=.89).

Negative parent-child communication:

There was no one measure included in the package of assessments which explicitly addressed the quality of communication between parents and children, therefore questions reflecting this theme were selected from three scales. A total of 15 items were selected to capture hostile communication with each parent, repetition of negative styles of communication and the degree to which communication revolved around child centred topics. Two questions were selected from the hostility/coercion sub-scale of the Iowa Youth and Families Project Rating Scales (Melby et al, 1993). Eight items were selected from the Children's Perceptions of Parent-Child Conflict

Scale (Harold, 1997) and five items were selected from the revised Child Report of Parental Behaviour Inventory (CRPBI; Margolies & Weintraub, 1977). Items included "How often in the past month has your mum/dad got into an argument with you"; "When my mum/dad and I argue he/she won't listen to anything I say" and "[my mum/dad] usually doesn't find out about my misbehaviour". Responses across items were standardised and children's reports of communication with mothers and fathers were summed to give an overall index of the quality of parent-child communication. Items were recoded in order that a higher score represented a more negative style of communication. Children's reports for both mothers' and fathers' communication had good internal consistency (mothers, α=.81; fathers, α=.82), as did the combined measure (α=.88)

Adolescent internalising symptoms:

Two self report measures were used to measure adolescent internalising symptoms. The first was the Children's Depression Inventory (CDI; Kovacs, 1981), which is a widely used measure of depressive symptoms. It consists of 26 items, although one item regarding suicidal thoughts was omitted (Time 1, α= .87; Time 2, α=.87). The second measure used to assess internalising was the Depression-Anxiety subscale of the Youth Self Report Form (YSR) of the Child Behaviour Checklist (CBCL, Achenbach, 1991a; Time 1, α= .84; Time 2,α=.87) which contains 14 items. The combined estimate demonstrated good internal consistency at both time points (Time 1, α=.90; Time 2, α=.92).

Adolescent Externalising problems:

This measure incorporated both adolescent and teacher reports of externalising behaviour. Children completed the aggression subscale of the CBCL (Achenbach, 1991a) and Buss and Durkee's (1957) measure of antisocial behaviour. Both measures

obtained good estimates of internal consistency across both time points (CBCL: Time 1, α=.81; Time 2, α=.85; antisocial behaviour: Time 1, α=.82; Time 2, α=.83).Teachers completed the Aggression subscale of the Teacher Report Form of the CBCL (Achenbach, 1991; Time 1, α=.93; Time 2, α=.94). All three measures were standardised at the item level and combined in order to give an overall estimate of externalising problems (Time 1, α=.90; Time 2: α=.90). On inspection, the distribution of this variable at both Time 1 and Time 2 was found to violate the assumption of normality, and thus in both instances the variable was square root transformed.

Results

Stages of analysis

For the purpose of this chapter, analyses were undertaken in two stages. First, in order to examine the extent to which results replicated earlier longitudinal findings, (Harold et al, 1997) the full theoretical model shown in Figure 1 was tested using the total sample of 315 children and teachers. Next, the sample was split to form low and high conflict groups based on the severity of the inter-parental conflict to which children had been exposed, specifically the degree to which children perceived conflict to be frequent, intense and poorly resolved, as indicated by scores on the conflict properties scale of the CPIC (Grych et al, 1992). Children scoring the median score (25) or below comprised the low conflict group and children scoring above the median comprised the high conflict group. Analyses were conducted separately based on these groups. In order to compare the statistical magnitude of equivalent pathways across models, a variation of Fishers r to z transformation, as recommended by Paternoster, Brame, Mazerolle, & Piquero (1998) was utilised to compare un-

standardised regression coefficients. Results of analyses undertaken using the full sample and low and high conflict groups are discussed with respect to each index of adjustment.

Preliminary analysis

Means and standard deviations for all study variables across the combined, low and high conflict samples are contained in Table 1. Comparison of mean scores across all variables of interest revealed that scores across all variables in the high conflict group were significantly higher than those for the low conflict group. The proportion of children reporting extreme levels of inter-parental conflict and symptom levels was also examined across each group, by documenting the proportion of children scoring two standard deviations above the combined sample mean. As expected, a higher proportion of children reported extreme levels of inter-parental conflict in the high conflict group (high: 9% vs. low 0%) as well as clinical level symptoms at both Time 1 (internalising: 8% vs. 2%; externalising: 7% vs. 3%) and Time 2 (internalising: 6% vs. 3%; externalising: 9% vs. 2%).

Correlational analysis

Table 2 contains the correlations among study variables for the full sample and Table 3 reports the correlations separately for low and high conflict groups. With respect to the full sample, all zero order correlations were significant and in the expected direction. Considering the zero order correlations across the low and high conflict subgroups; children's perceptions of conflict were found to be related to children's internalising and externalising problems in both cases, although the correlation between perceptions of conflict and externalising behaviour was only marginally significant in the case of the high conflict group. Children's perceptions of conflict were also related to appraisals of threat and parent-child communication

across both groups. Perceptions were unrelated to appraisals of self blame in the high

conflict group and marginally related in the low conflict group. Correlations between

all measures of children's appraisals were significant across both groups. In turn,

children's appraisals were associated with both indices of child adjustment, across

both groups with the exception of threat appraisals in the high conflict group, which

were unrelated to externalising.

Table 1

Means and Standard Deviations for all Study Variables of Interest

	Combined sample		Low Conflict		High Conflict		Mean difference
	M	SD	M	SD	M	SD	t
1999							
1. Perceptions of conflict	26.65	7.22	21.20	2.52	32.71	5.77	22.48**
2. Internalising	15.82	10.50	12.62	8.67	19.40	11.21	5.96**
3. Externalising	6.92	1.47	6.53	1.40	7.35	1.43	5.15**
2000							
4. Appraisals of threat	18.62	5.56	16.64	4.53	20.83	5.77	7.11**
5. Appraisals of blame	12.51	3.99	11.61	3.20	13.51	4.53	4.26**
6. Appraisals of parent-child communication	0.00	11.42	-3.48	10.27	3.88	11.43	6.00**
7. Internalising	16.11	11.64	13.48	9.83	19.04	12.78	4.29**
8. Externalising	6.90	1.57	6.58	1.37	7.25	1.69	3.82**

Note. Total sample, N= 315; Low conflict, N=166; High conflict, N=149

**$p<.01$

Table 2. Intercorrelations among all theoretical constructs for the total sample

	1	2	3	4	5	6	7	8
1999								
1. Perceptions of conflict	1							
2. Internalising	.41**	1						
3. Externalising	.29**	.34**	1					
2000								
4. Appraisals of threat	.46**	.43**	.15*	1				
5. Appraisals of blame	.25**	.25**	.27**	.42**	1			
6. Appraisals of parent-child communication	.42**	.39**	.39**	.37**	.48**	1		
7. Internalising	.33**	.62**	.22**	.49**	.34**	.49**	1	
8. Externalising	.26**	.27**	.72**	.23**	.36**	.46**	.28**	1

Note. $N=315$. $*p<.05.**p<.01.$

Table 3. Intercorrelations among all theoretical constructs for low and high conflict groups

	1	2	3	4	5	6	7	8
1999								
1. Perceptions of conflict	-	.32**	.10	.30**	.10	.34**	.27**	.16[a]
2. Internalising	.17*	-	.24**	.34**	.11	.30**	.53**	.20*
3. Externalising	.16*	.32**	-	-.02	.32**	.32**	.15[a]	.71**
2000								
4. Appraisals of threat	.30**	.37**	.14[a]	-	.29**	.24**	.50**	.13
5. Appraisals of blame	.14[a]	.32**	.08	.48**	-	.51**	.29**	.39**
6. Appraisals of parent-child communication	.21**	.33**	.33**	.35**	.36**	-	.44**	.47**
7. Internalising	.17*	.69**	.17*	.36**	.33**	.47**	-	.24**
8. Externalising	.16*	.25**	.70**	.23**	.24**	.36**	.26**	-

Note. Low conflict, $N=166$; High conflict, $N=149$. Low conflict below the diagonal, high conflict above $*p<.05.,**p<.01.$ [a]$p<.10$

Regression analyses

Children's perceptions of inter-parental conflict and children's internalising symptoms

Preliminary tests of the model showed a significant association between children's perceptions of marital conflict and their internalising symptoms, (β=.33, p<.01). However, this association became non significant on the addition of children's Time 1 adjustment to the model (β=.09, p>.10). As this was the case, these data did not meet the criteria necessary to define a mediational pathway as set out by Baron and Kenny (1986). Although this result rules out the possibility that children's appraisals may mediate the relationship between perceptions of conflict and internalising symptoms, appraisals may serve as an intervening mechanism in explaining this association. It is accepted that an independent variable may have an indirect effect on a dependent variable even when they are not correlated, if the independent variable influences a third variable, which in turn affects the dependent variable (Mackinnon et al, 2002). Examining indirect pathways is valuable in elucidating important processes set in motion by the occurrence of inter-parental conflict (Grych et al, 2003).

As expected the stability coefficient between internalising symptoms at Time 1 and Time 2 was strong and significant (β=.45, p<.01). By controlling for initial symptom levels the model takes into account the effect of earlier symptoms on appraisals which both controls for a negative affectivity bias (Watson & Pennebaker, 1989) and the inflation of covariance between measures, which is a caveat of monoinformant studies. Further, this provides an index of change in adjustment as a function of the proposed antecedent and intermediary conflict and appraisal measures included in the model (Kessler & Greenberg, 1981). Children's symptoms at Time 1

were associated with all appraisal measures at Time 2 (threat: $\beta=.29$, p<.01; blame: $\beta=.17$, p<.01; parent-child communication: $\beta=.18$, p<.01)

In assessing the first criterion for an indirect effects model, the relationships between children's perceptions of inter-parental conflict and appraisals were found to be significant, even after accounting for the effect of earlier symptoms (threat, $\beta=.34$, p<.01; parent-child communication, $\beta=.24$, p<.01; blame, $\beta=.18$, p<.01). Appraisals of self blame ($\beta=.36$, p<.01), but not threat were associated concurrently with appraisal of the parent-child relationship. Appraisals of threat and parent-child communication were associated with internalising ($\beta=.22$, p<.01; $\beta=.24$, p<.01 respectively), although the association between appraisals of self blame and internalising was non significant.
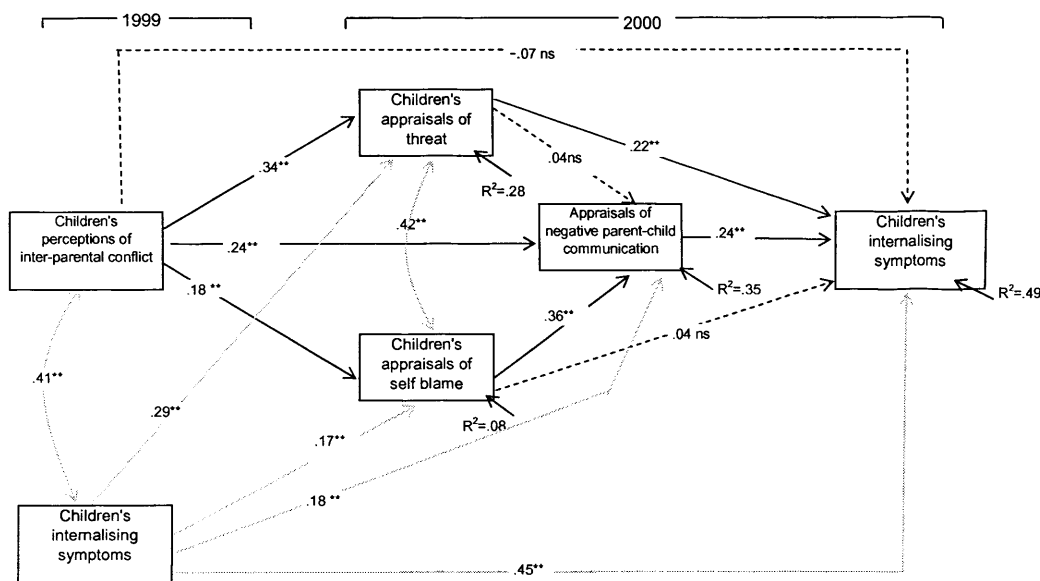

Figure 2. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and internalising symptoms for the combined sample *p<.05 **p<.01, [ns]not significant.

Results pertaining to sub group analyses (low vs. high conflict) are contained in Figure 3 (Panels A and B). Whilst the initial effect of perceptions of conflict on internalising symptoms was found to be significant for both the low and high groups (β=.17, p<.05; β=.27, p<.01, respectively), in both instances the pathway dropped to non significant on the addition of Time 1 symptoms.

With respect to the low conflict group, Time 1 symptoms were related to appraisals of threat, self blame and the parent-child relationship (β=.33, p<.01; β=.30, p<.01; β=.20, p<.01 respectively). The degree of stability between Time 1 and Time 2 symptoms was high (β=.58, p<.01). Perceptions of conflict were related to Time 1 appraisals of threat (β=.24, p<.01), however the pathways between conflict and appraisals of blame and the parent child relationship did not attain significance. Appraisals of threat and self blame were related to children's evaluations of the quality of relations between themselves and their parents (β=.16, p<.10; β=.18, p<.05 respectively), although in the case of threat, this association was only marginal. Appraisals of the parent-child relationship were in turn related to symptoms (β=.25, p<.01), although this was not the case for appraisals of threat or self blame.

The model containing the results for the high conflict group shows that symptoms at Time 1 were related to appraisals of threat (β=.27, p<.01) but not blame. Symptoms were also related to appraisals of parent-child communication (β=.18, p<.01). Further, similar to the low conflict model, symptoms at Time 1 were moderately related to symptoms one year later (β=.35, p<.01). Children's awareness of inter-parental conflict were related to both appraisals of threat (β=.21, p<.01) and appraisals of communication quality with parents (β=.25, p<.01), although not to appraisals of blame. Appraisals of blame were however positively related to appraisals of the parent-child relationship (β=.48, p<.01), although in this instance

appraisals of threat were not. In contrast to results contained in the previous model, appraisals of threat were significantly associated with children's internalising symptoms (β=.32, p<.01). In comparing the magnitude of regression coefficients, this was the only path found to differ statistically across low and high conflict groups (low conflict b=.17, p>.05, high conflict b=.71, p<.01, z = -3.10, p<.01) Appraisals relating to the quality of communication with parents were associated with concurrent levels of internalising symptoms.

The results contained in Figure 3 suggest that conflict of differing levels of perceived severity impact on children's internalising via slightly different mechanisms, with low perceived conflict having its effect on symptoms indirectly through the combined effect of children's appraisals of threat stemming from their awareness of conflict and appraisals of the parent child relationship. High levels of conflict on the other hand appears to have a direct effect on children's adjustment, through perceptions of threat, as well as an indirect effect through children's evaluations of the quality of relations with their parents. This indirect effect differed from that observed in analyses relating to the low conflict group, in that children's awareness of conflict was directly associated with perceptions of parent-child relations, rather than being linked through appraisals of threat or blame.

Panel A
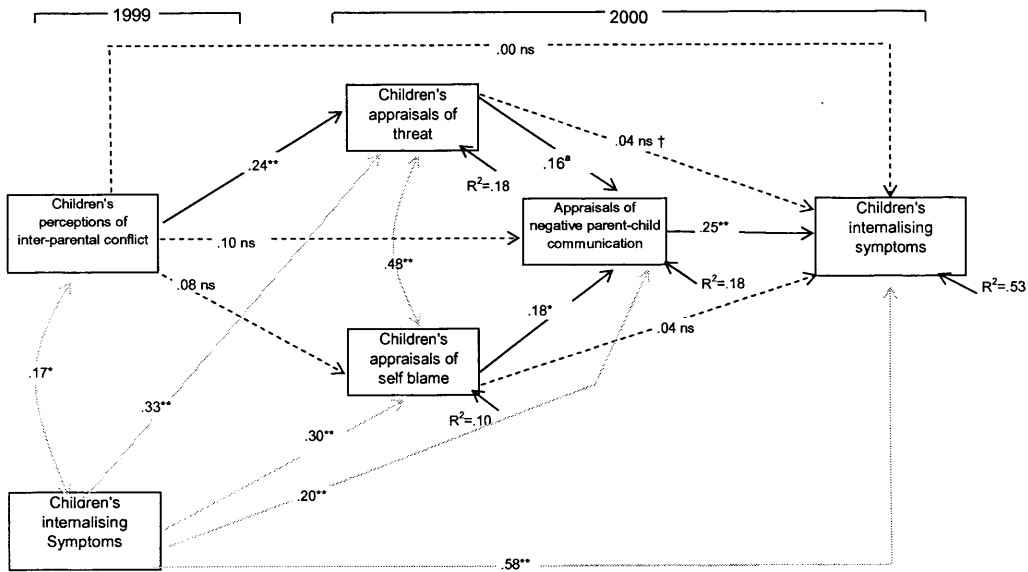
Panel B

Figure 3. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and internalising symptoms for low (Panel A) and high (Panel B) conflict groups, [a]p<.10,*p<.05 **p<.01, [ns]not significant.

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Children's perceptions of inter-parental conflict and externalising problems

Analysis using the total sample, shown in Figure 4, revealed that the association between children's appraisals of conflict and externalising behaviour was significant (β=.25, p<.01), although this dropped to a marginal effect after accounting for the effects of Time 1 symptoms (β=.08, p<.10), thus again, these data did not meet the criteria for mediation (Baron & Kenny, 1986). As previously noted with relation to internalising, externalising behaviour over time was highly stable (β=.60, p<.01). Further, earlier symptoms were related to blame and appraisals of the parent-child relationship (β=.22, p<.01, β=.22, p<.01 respectively), but not to appraisals of threat. Perceptions of inter-parental conflict were related to all measures of children's appraisals (threat, β=.46, p<.01; blame, β=.20, p<.01; parent-child relations, β=.24, p<.01). Appraisals of both threat and blame were significantly related to concurrent appraisals of the quality of communication with parents (β=.10, p<.10; β=.32, p<.01 respectively). In turn, appraisals of the parent-child relationship and appraisals of self blame were related to externalising behaviour (β=.15, p<.01; β=.12, p<.01 respectively).
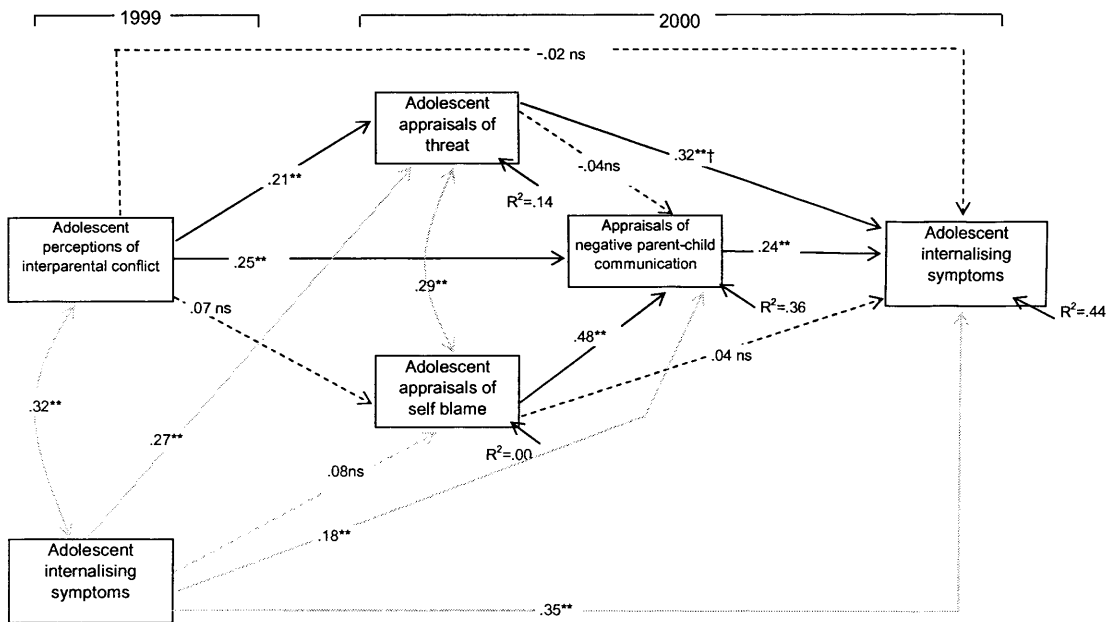
Figure 4. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and externalising problems for the combined sample [a]p<.10,*p<.05 **p<.01, [ns]not significant.

Figures 5 (Panels A and B) show the results of the sub-group analyses. The initial paths between perceptions of conflict and later externalising problems were not significant in either the low conflict or high conflict models even when perceptions of conflict were the only predictor to be included in the model. Therefore in both cases, these analyses consider the role of appraisals as intervening linking mechanisms rather than as mediators of the association between perceptions of conflict and children's later externalising. With respect to the low conflict group, the stability coefficient between Time 1 and Time 2 symptoms was high (β=.64, p<.01) and symptoms at Time 1 were related to appraisals of parent-child communication only (β=.28, p<.01). Appraisals of conflict were significantly associated with threat appraisals (β=.29, p<.01) and marginally associated with appraisals of self blame

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(β=.13, p<.10). Both threat and blame appraisals were related to evaluations of parent-child communication (β=.19, p<.05; β=.21, p<.01), but only appraisals of blame were associated with children's symptoms at Time 2 (β=.13, p<.05).

From Panel B, representing the high conflict group, it can be seen that the stability of symptoms over time was again high (β=.59, p<.01) and externalising problems were associated with appraisals of blame and parent-child relations (β=.32, p<.01; β=.16, p<.05) but not threat. In this instance children's perceptions of destructive marital conflict were associated with their later appraisal of threat and parent-child communication (β=.30, p<.01; β=.28, p<.01 respectively). The relationship between children's perceptions of conflict and appraisals of blame was non significant, however blame was significantly associated with appraisals of the parent-child relationship (β=.42, p<.01), whereas threat appraisals were not. Only children's appraisals of parent-child communication were significantly associated with concurrent externalising problems (β=.22, p<.01).

These results, like those relating to internalising, suggest that the mechanism through which children's perceptions of conflict may impact on externalising problems may differ across the spectrum of perceived destructiveness of inter-parental conflict. Low levels of perceived conflict appear to have a direct effect on children's externalising problems through appraisals of blame, whereas higher levels of conflict appear to impact on children indirectly through perceptions of the parent –child relationship. Again, as with the previous high conflict model, children's awareness of more severe conflict and not their appraisals of threat or blame orientated appraisals of the parent-child relationship.
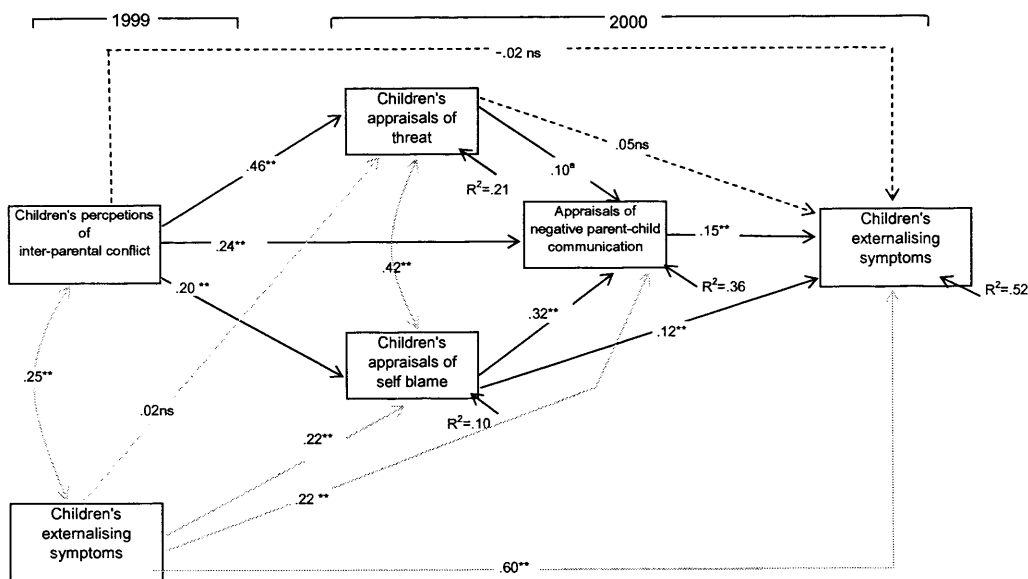
Panel A
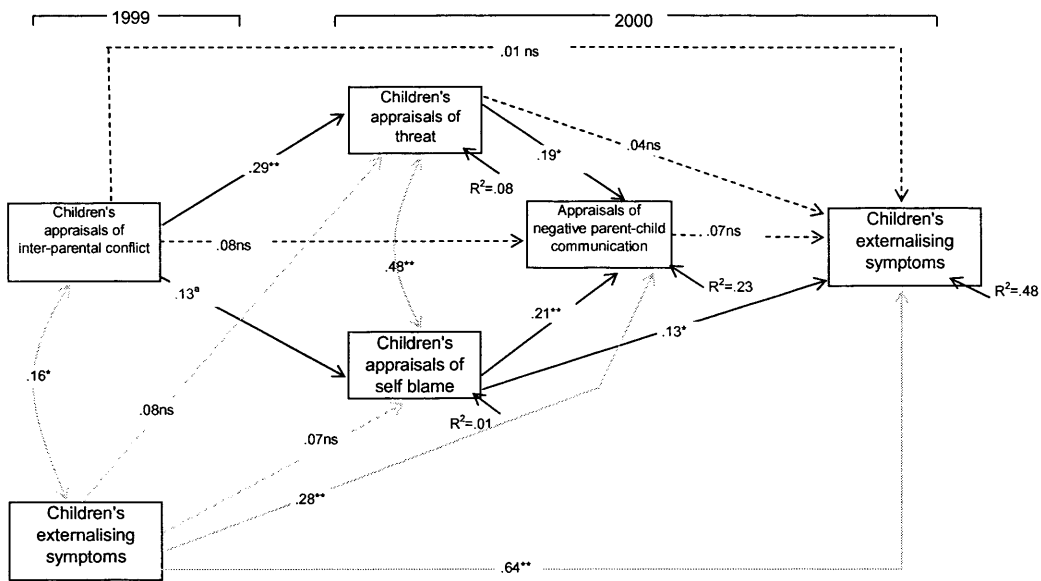
Panel B

Figure 5. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relation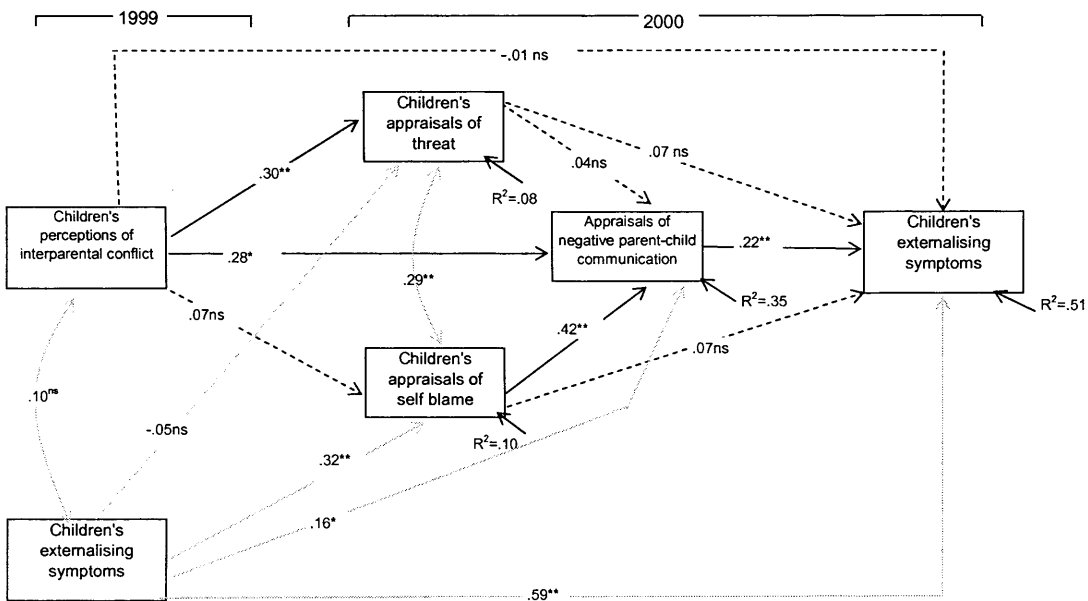ship quality and externalising symptoms for low (Panel A) and high (Panel B) conflict groups, $^{a}p<.10, ^{*}p<.05$ $^{**}p<.01, ^{ns}$not significant.

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Discussion

This study served to integrate hypotheses drawn from the cognitive contextual framework with Harold and colleagues' family wide model (Harold & Conger, 1997; Harold et al, 1997) in order to provide a more comprehensive account of the way in which children's exposure to conflict influences their adjustment. This study also set out to consider how this process might unfold as a function of the level of destructiveness associated with parents' marital conflict. It denotes the first longitudinal test of the role of children's threat and self blame appraisals stemming from inter-parental conflict and appraisals of parent-child relationship quality in explaining child adjustment in the face of differing levels of adjustment.

Considerable support for the family wide model of effects was garnered in this study whereby children's awareness and appraisal of the meaning of inter-parental conflict was found to be related to appraisals of parent-child relationship quality, supporting the notion that appraisals of inter-parental conflict serve as a primer of children's cognitions relating to other family relationships (Harold et al, 1997; Harold et al, 2004). For the most part children's appraisals of parent-child relationship quality were directly linked to children's adjustment problems. There were however, some important differences in the pattern of effects as a function of the level of destructiveness associated with conflict, particularly with respect to the role played by threat and blame, underscoring the utility of disentangling the processes through which exposure to different levels of conflict acts on children's psychological functioning.

Internalising symptoms

Analysis of the full sample appeared to yield support for hypotheses drawn from both the family wide model of effects and also the cognitive contextual

framework. In line with Harold's work (Harold & Conger, 1997; Harold et al, 1997), children's awareness and appraisals of inter-parental conflict were found to affect internalising symptoms one year later indirectly, through children's appraisals of negative parent-child communication. In addition, children's perceptions of conflict were found to impact directly on later adjustment through children's appraisals of threat. These results suggest that children's awareness of conflict and their attempts to evaluate its meaning create a cognitive backdrop against which the quality of the parent-child relationship is appraised, and that furthermore, conflict may affect children directly when it is determined by children to be threatening. These results support the notion of an integrated model including both direct and indirect pathways, by which to better understand child adjustment in the context of inter-parental conflict. However, the subgroup comparisons revealed some potentially interesting differences.

Figure 3 (Panels A and B) shows that children exposed to lower and higher levels of conflict (according to the child's perspective) were affected indirectly, through appraisals of parent-child relationship quality, indicating that conflict effects children through perceived or expected disruptions to the parent-child relationship. As can be seen from Panel A, in the context of low conflict children's appraisals of threat appeared to mediate the association between awareness of conflict and appraisals of the parent-child relationship, whereas in the case of high conflict children's awareness of destructive conflict was associated directly with appraisals of parent-child relationship quality. Both sets of findings suggest that behaviour occurring between parents informs children's view of the relationship with their parents, supporting the notion of emotional priming of children's cognitions (Harold et al, 2004). However, the results contained within panel A suggest that lower level conflict may not be

sufficient to impact directly on the belief that parents will be overly disengaged or hostile in their communication with children. Increased conflict within this group may still represent fairly constructively expressed conflict and thus awareness of conflict may not, in and of itself, cause children to be overly concerned about its implications for other family relationships. Nonetheless, the occurrence of even low levels of conflict seems to be enough to set in motion children's further processing of a conflicted exchange between parents, perhaps as a result of children drawing on their bank of stored knowledge relating to parents' previous disagreements (Crick & Dodge, 1994). Parents' inability or unwillingness to assuage children's anxieties about conflict, that on the face of it seems of relatively low level, may lead children to believe there is something of significance that isn't being shared, increasing children's vigilance for signs of negativity in all family relationships. In this context, children may benefit from high quality communication with a parent that emphasises family security. On the other hand, attempts to cast high levels of conflict in a positive light may serve as a vulnerability to the development of adjustment problems (Winter, Davies, Hightower & Meyer, 2006).

In contrast to the indirect effect in the low conflict group which operated only through children's appraisals of threat, examination of relations in the high conflict group revealed that initial perceptions of conflict were directly associated with appraisals of parent-child communication, which were in turn related to internalising symptoms. Overtly hostile behaviour between parents, in and of itself, is likely laden with meaning and thus it seems intuitive that in high conflict homes, children's awareness that conflict is taking place may be sufficient to activate fears that negativity may spill over into the parent-child dyad, either because parents are overly hostile and attempts to communicate may result in arguments, or because they

disengage from children and positive styles of communication maybe equally difficult to maintain.

Children's perceptions of conflict in the context of high conflict also exerted a direct effect on children's later internalising symptoms through their appraisals of threat, even after accounting for the effect of appraisals relating to the parent-child relationship. This is in line with Harold et al's (1997) finding, although in this case the direct effect was limited to boys' concurrent internalising symptoms. Further, the direct pathway through appraisals of threat replicates the findings of Grych et al (2003) and lends further support to the hypothesis that children who witness destructive conflict between parents become sensitised to subsequent instances of discord (e.g. Cummings et al, 1989; Gordis, Margolin & John, 1997; Laumkis, Margolin & John, 1998). Inter-parental conflict at this level may pose a very real threat to children's and parents' well -being, thus this direct effect through threat may be indicative of children's accurate assessment given the potentially dangerous nature of the situation. Accurate detection of threat enables children to mobilise physiological and psychological resources quickly in order that they may act to keep themselves safe (Rossman, 1998). Further, children's previous exposure to conflict may lower their threshold for responding negatively, so that equivalent levels of conflict evoke greater distress in these children than in those who have not previously been exposed to conflict to the same degree (Cummings et al, 2000). This may lead children to respond in a manner that far outweighs the level of threat which the situation poses, which over time may form the basis of a maladaptive response pattern. It stands to reason that the more that children are exposed to frightening and upsetting conflict, the more they will anticipate it's occurrence in the future, further heightening levels of vigilance and increasing their sensitivity to parental behaviour.

As children's conflict histories were not controlled for in this study it is difficult to ascertain whether children's appraisals of threat represented this sensitisation effect or merely an accurate representation of parents' behaviour.

The two wave longitudinal design utilised for the purpose of this study allowed for the examination and control of the influence of children's earlier symptoms on children's appraisals of family relationships. Inclusion of the path representing the stability of children's symptoms over time allowed for the variance in the outcome variable, accounted for by Time 1 symptoms to be partialled out. This in turn provided an index of change in the dependent variable as a function of children's appraisals of threat, self blame and parent-child relations (Kessler & Greenberg, 1981; Grych et al, 2003). Controlling for the effects of previous symptoms on children's appraisals of family relationships offered similar benefits. It is acknowledged that children with heightened symptom levels may be more likely to report negative feelings in relation to the inter-parental and parent-child relationships (Puliafico & Kendall, 2006; Watson & Pennebaker, 1989) and estimation of this pathway allowed for statistical control of this symptom level effect

Of note is the significant association between children's earlier internalising symptoms and appraisals of threat across both low and high conflict groups. As outlined in the previous chapter, high levels of anxiety in children have been linked with an attentional bias for threat related information which may magnify the level of threat that children perceive in their environments (see Puliafico & Kendall, 2006 for a review). This type of attentional bias has been identified in specific relation to children's clinical level symptoms (Puliafico & Kendall, 2006), although these results appear to suggest that relatively lower levels of problems, as evidenced by the low conflict group, may also induce this attentional bias. This is in line with a recent study

that considered the role of anxiety in a non-referred group of children, where the authors categorised symptoms as more akin to 'worry' rather than anxiety (Suarez-Morales & Bell, 2006). It was found that children's worry was related to appraisals of threat when presented with hypothetical situations. By accounting for the effect of symptoms on children's later appraisals however, this effect on information processing was controlled for, with the significant paths between inter-parental conflict and threat indicating that perceptions of inter-parental conflict impact on appraisals of threat, over and above the effects of a possible attentional bias. With respect to the relationship between adjustment and appraisals of blame, a significant association was found for the low conflict group only. Examination of the mean levels of internalising symptoms across groups revealed that internalising symptoms were significantly higher for children exposed to high conflict. It may be therefore, that the lack of association between Time 1 adjustment and Time 2 self blame seen in Figure 3 (Panel B), represents children's sense of hopelessness in the face of aversive inter-parental conflict. Children exhibiting higher levels of depression may perceive a lack of control over family events, believing that their actions have little impact on the way that things unfold (Grych, 1998; Grych & Fincham, 1990), which may be reflected in their lower levels of self blame appraisals. Locating the cause of aversive events to external and uncontrollable sources has been linked with higher rates of maladjustment (Bolger & Patterson, 2001), and children who feel able to exert some control over inter-parental conflict have been found to show higher levels of adjustment (Patenaude, 2000). Across both groups, children's internalising symptoms were associated with appraisals of parenting suggesting that even relatively low level symptoms may impact on children's view of the quality of parent-child relations. This may also be a reflection that children's internalising symptoms may be a source of

irritation to parents, increasing the propensity for negative styles of communication to characterise parent-child interactions.

Overall, these results support the proposed family wide model of effects where perceptions and/or appraisals of conflict prime children's appraisals of the parent-child relationship, which in turn communicates effects to children's internalising symptoms. Moreover, appraisals of the parent-child relationship appear to provide a key mechanism through which the effect of conflict, irrespective of its perceived destructiveness, is conveyed to children. Further, these results illustrate that the meaning that children attach to conflict in the context of lower level conflict, over and above its occurrence, creates a context in which the parent-child relationship is evaluated. In contrast, simple awareness of more severe inter-parental conflict may be sufficient to activate children's concerns relating to the implications for the quality of parent-child relationship quality. The finding that highly hostile conflict exerted a direct effect on children, that was largely independent of concerns relating to parent-child relationship quality suggests that the mechanisms underpinning the communication of conflict of different levels to children's internalising symptoms may differ; underscoring the need to consider a more fine grained operationalisation of conflict in order to better understand how children's different experiences may impact on adjustment.

Children's externalising problems

Analysis of the full sample indicated that exposure to inter-parental conflict affected children's externalising problems one year later both directly, through children's appraisals of self blame and indirectly, through children's appraisals of inter-parental conflict and their appraisals of parent-child negativity. However, again there was some deviation from this pattern of results when subgroup comparisons

across low and high conflict groups were undertaken. The findings showed more or less the converse pattern to those relating to internalising, whereby in the context of low conflict children's perceptions of conflict affected their adjustment directly, through their appraisals of self blame, whereas in the context of high conflict, children's perceptions of conflict impacted on adjustment indirectly, through the joint effect of children's awareness of inter-parental conflict and appraisals of negative communication with their parents.

The finding that in the context of low conflict, children's awareness of conflict had a direct effect on later externalising through appraisals of blame replicates the longitudinal findings of Grych et al (2003) in relation to a community sample of adolescent boys and girls. In this study it was found that children's perceptions of inter-parental conflict predicted children's appraisals of self blame one year later, which in turn predicted their concurrent externalising problems. The study controlled both for the stability in children's earlier symptoms and appraisals. Crucially, this study also ruled out the possibility that these results reflected a statistical artefact associated with using primarily children's reports by estimating the model a second time using parents' reports of marital conflict. This set of results showed a similar pattern of effects giving greater confidence that inter-parental conflict was a causal agent in determining children's later appraisals. The significance of this pathway in the present study indicates that the occurrence of inter-parental discord, even in low conflict families, increases the propensity for children to see themselves at fault for causing the conflict. Attributions of this kind are thought to result in children's increased feelings of guilt, shame and sadness, which in turn are thought to increase the propensity for externalising problems. This effect may in part be due to the fact that children perceive a greater sense of agency when they see themselves to blame

for conflict (Grych & Fincham, 1990; Grych & Fincham, 1993) and thus may be more likely to intervene in parents' disputes (Schermerhorn, Cummings & Davies, 2005; Schermerhorn et al 2007).

It was somewhat surprising however, to find that this direct effect through children's appraisals of conflict was absent from the high conflict model, particularly as it might be expected that parents who argue more frequently and more intensely may be more likely to disagree about child related problems more often, a factor known to increase children's appraisals of self blame (Grych & Fincham, 1993). Indeed, child related issues are found to be topics of conflict which may culminate in episodes of very hostile conflict (e.g. Edelson, Eisikovits, Guttman & Sela-Amit, 1991; Straus, Gelles & Steinmetz, 1991). Even in the absence of a difference in the proportion of child related conflict across low and high conflict households there is likely to be a difference in children's exposure, owing to the overt manner in which conflict is likely to be expressed in high conflict homes. What is more, evidence suggests that parents do not tone down their conflict in the presence of their children; rather children tend to be exposed to a particularly negative subset of parents' conflicts. For example, Papp et al. (2002) conducted a study where parents completed daily diaries detailing the nature of their conflicts over a two week period. Using a check list parents made note of the topic to which the conflict related, tactics used during the conflict, emotionality during and after the disagreement and whether a child was present whilst the conflict took place. It was found that whilst two thirds of conflict took place in the absence of children, the one third to which children were party was relatively more destructive that other conflicts, where tactics such as aggression, verbal hostility and personal insult were more likely to be used. Parents also reported more negative emotions and less positive emotions and conflict topics

were more likely to revolve around child related themes. Further, in highly hostile homes children may be exposed to a greater proportion of the total amount of conflict taking place. As reported in the opening chapter, one study reported that children were present in the home during 75% of violent assaults against their mother (Hutchinson & Hirschel, 2001). In a further study it was found that nearly 80% of mothers estimated that children were aware of marital conflict in violent homes 'most of the time' (Holden, 1998).

Based on this evidence, it seems counterintuitive that higher levels of inter-parental conflict did not invoke higher levels of blame, although this is consistent with a recent study which found that changes in children's exposure to marital conflict covaried with changes in children's appraisals of threat but not blame (Richmond & Stocker, 2007). By way of explanation, the authors suggest that children's appraisals of blame may be influenced by the broader context in which marital conflict takes place. Thus, in line with this, one explanation for the lack of a direct effect through blame is the relative amounts of negative to positive expressed emotion that characterised both low and high conflict families in this study. In investigating the relationship between the broader emotional climate of the family and children's appraisals of inter-parental conflict, Fosco & Grych (2007) found that parents' expression of positive and negative affect was related to children's appraisals of blame, where the combination of expressed emotions was seen to account for more variation in children's feelings of being to blame for conflict, than either emotion alone. It was found that children exhibited the highest levels of blame when families exhibited high levels of negativity and low levels of positivity. Children whose families exhibited high levels of both positivity and negativity did not differ significantly in their levels of perceived self blame from those children whose

families displayed high levels of positive affect and low levels of negative affect. Therefore, it is possible that the high conflict families in this study also demonstrated high levels of family positivity, which moderated the impact of conflict on blame.

As raised in Chapter 3, a second explanation for these findings is that in the context of highly hostile homes children may be less likely to blame themselves for the occurrence of inter-parental conflict - perhaps due to the nature of their behaviour, blame is easier to locate with parents (Grych, 1998; Grych et al, 2000). Indeed, Weber & O'Brien (1999) have found that children are more likely to spontaneously blame parents in response to high intensity as compared to low intensity marital conflict and in particular, children appear to have a propensity to blame fathers in the context of high intensity conflict (Grych, 1998). This may explain why perceptions of conflict were related to self blame, only in the case of low conflict, although Weber and O'Brien (1999) also found that children from high conflict homes engaged in all round higher levels of blaming, both of themselves and their parents.

The lack of a direct effect through appraisals of self blame is congruous with the findings of other studies that have sampled children hailing from highly hostile and violent family backgrounds, all of which have found children's appraisals to mediate the association with internalising, but not externalising (Grych et al, 2000; Kerig, 1998; Stocker et al, 2003). It is suggested that other types of appraisals may be more likely to communicate directly the effects of hostile conflict, particularly to children's externalising behaviour. For example, Fosco et al (2007) suggest that children's beliefs about the acceptability of aggression may be particularly important to consider when studying processes through which violence impacts on adjustment. Based on social learning principles (Bandura, 1986) they argue that the messages generated regarding the acceptability of using violence or excessive anger may be

particularly strong when children observe a parent using these types of strategies to problem solve and moreover, when they prove successful in obtaining a desired goal. Children who are repeatedly exposed to hostile models of behaviour may be more likely to evaluate aggression positively, expect it to lead to positive outcomes, and view it as an appropriate way of achieving a goal (Crick & Dodge, 1996; Dodge et al, 1997; Hubbard, et al. 2001; Schwartz, et al, 1998), making it likely that children may adopt these strategies across different relationships and settings. The belief that aggression is an acceptable means of conflict resolution is particularly associated with proactive aggression rather than reactive aggression where children 'lash out' in response to the perceived hostile action of another (Crick & Dodge, 1996; Smithmyer et al, 2000) Thus, appraisals of this type may be closely linked with children's externalising behaviours as assessed by parents, teachers and peers (e.g. Kinsfogel & Grych, 2004; Marcus et al, 2001).

Children's perceptions of conflict in the context of high conflict were found to effect externalising problems *indirectly*, through their appraisals of negative parent-child communication. Children's awareness of destructive conflict was linked directly to children's appraisals of the parent-child relationship. This is in keeping with Harold's (Harold & Conger, 1997; Harold et al, 1997) initial findings where awareness of conflict frequency was found to inform adolescent awareness of parent hostility and furthermore, is consistent with the findings relating to the previous high conflict model (Figure 3, Panel B). This suggests that simple awareness of highly hostile inter-parental conflict is sufficient to activate children's negative evaluations of parent-child interactions.

That effects were communicated to children's externalising behaviour, through their appraisals of parent-child relations rather than those relating to the marital

relationship are consistent with the findings of Stocker et al (2003) who also found that, in the context of inter-parental hostility (rated by parents and independent observers), children's appraisals of parent negativity and not children's appraisal of inter-parental relations mediated the association with externalising problems. These results, together with studies that find no effects through appraisals of inter-parental behaviour in the context of violent homes (Grych et al, 2000; Kerig, 1998; Stocker et al, 2003), suggest that children's appraisals of parenting-related processes may be more important in predicting externalising problems when family environments are marked by elevated levels of hostility and violence.

With particular respect to the aspect of the parent-child relationship considered here, children's evaluations of the way in which they are able to communicate with parents may be especially important in understanding the aetiology of externalising problems for several reasons. First, parents' inability to communicate with children in a fair and consistent manner may leave children feeling thwarted and frustrated, particularly if they have explicitly engaged with parents in order to foster a sense of closeness in the context of hostile inter-parental relations (Owen & Cox, 1997). Heightened levels of frustration may lead to children's outbursts of anger (Berkowitz, 1989), which are likely to be reflected in teachers and children's own reports of externalising behaviours. Second, the amount and depth of knowledge that parents have in relation to their children's whereabouts and activities has been shown to be a key variable in understanding the development and prevention of children's antisocial behaviour, including substance misuse (see Stattin & Kerr, 2000 for a review). The amount of knowledge that parents have in relation to their children's activities is thought to be largely obtained through children's spontaneous disclosure (e.g. Stattin & Kerr, 2000). Crucial to this exchange of information however, is the quality of

parent-child communication; parents are most likely to be privy to information about their children's lives outside of the home when parents and children have a good rapport and communication is marked by acceptance and respect. Both the level of children's disclosure and broad patterns of communication between parents and children have been linked with delinquent and antisocial behaviour (Cernkovich & Giordanno, 1987; Cohen & Rice, 1995; Otto & Atkinson, 1997, Stattin & Kerr, 2000). The results yielded here further support this link, but importantly suggest that it is children's *evaluation* of the quality of communication that may be important to understanding when information is and isn't shared, and consequently how effective parents are in steering children away from antisocial behaviour.

In examining the alternative hypothesis that children's appraisals were a function of their previous adjustment, it was found that externalising was not linked with appraisals of threat in either model, which was in keeping with Grych et al's (2003) earlier findings. Children's externalising problems were associated with later appraisals of self blame in the high conflict model, although not in the low conflict model. Time 1 externalising problems were significantly higher for the high conflict group and thus it is possible that this association may reflect that children, to some extent, recognise that their behaviour problems are the topic of parents' conflict. Further, externalising was associated with appraisals of negative parent-child conflict in both groups, reflecting the fact that the association between parenting and child behaviour is likely to be reciprocal, particularly in high conflict homes (Patterson, 1982).

As with internalising, these results indicate that there are differences in the mechanisms through which conflict of different degrees of perceived destructiveness impacts on children's externalising problems. At low levels of conflict, only

children's appraisals of inter-parental conflict were found to be important in explaining increases in children's externalising behaviour, even after perceptions of parenting had been accounted for. This finding is in line with that of Grych et al (2003), and suggests that feeling at fault for parents' conflict offers the primary mechanism through which lower levels of perceived inter-parental conflict affects children's externalising problems. On the other hand, children's exposure to hostile forms of inter-parental conflict seems to directly inform children's appraisals of the quality of parent-child relations. Appraisals of the parent-child relationship appear to serve as the gateway through which the effects of more hostile forms of conflict impact on children's behaviour.

Taken together this set of results yields, for the most part, support for the central notion of the family wide model of effects, whereby children's awareness and appraisal of inter-parental behaviour has an effect on the way children view relations with their parents, which in turn serves as a primary means through which conflict has its effect on internalising and externalising problems. Support for this contention was largely found irrespective of the level of conflict to which children were exposed, although the extent to which children's appraisals of threat and self blame were implicated in this process was found to vary as a function of the level of conflict and also the index of adjustment being considered. Specifically, at lower levels of conflict, the meaning that children assign to parental arguments provides the backdrop against which children's appraisals of the parent-child relationship are formulated. When conflict is particularly destructive however, awareness of its occurrence alone appears to be sufficient to impact on children's appraisals of the parent-child relationship, independent of the levels of threat and self blame that it evokes. This suggests that children who are routinely exposed to high levels of their parents' conflict are so well

versed in the way that it will play out that they are acutely aware of its potential implications for other family relationships without having to engage in deeper processing. This may indicate heavy reliance on schematic knowledge rather than accurate appraisal of the specific features of the conflictual exchange (Grych & Cardoza-Fernades, 2001). Alternatively, children's ability to regulate emotions may be undermined by previous exposure to high levels of conflict so that the first sign of a problem between parents, renders them more reactive to negative parent-child exchanges (El-Sheikh et al, 2008).

Importantly, as well as serving as an orientating influence of children's evaluations of parent-child relations, appraisals of threat and blame served as a direct mechanism through which exposure to conflict affected children's adjustment. Further, these direct effects were found to vary as a function of the level of conflict to which children were exposed and the index of adjustment in question. Children who experience higher levels of threat in the context of highly hostile conflict seem to be at particular risk of experiencing internalising symptoms, whereas children who feel at fault for parents' lower level conflict are at risk of externalising problems. Significantly, in the context of less severe inter-parental conflict, children's appraisals of blame offer the only mechanism through which children's awareness of inter-parental conflict influence externalising problems.

Overall, these findings suggest that children's evaluations relating to the quality of multiple family relationships are important in understanding the manifestation and maintenance of children's adjustment problems in the face of inter-parental conflict. The next study presented in this chapter seeks to determine whether the processes identified here as communicating the effects of low and high conflict to

children's adjustment extend to explain the adjustment of younger children in the context of differing levels of inter-parental conflict.

Study 2

<u>Introduction</u>

Whilst there has been much more attention of late, given over to the role of children's cognitive processes in explaining the impact of inter-parental conflict on child adjustment (e.g. Buehler et al., 2007; Grych et al., 2003), much of this work has focused on the understanding that *adolescent* children derive from their parents' conflictual exchanges (McDonald & Grych, 2006). To date, relatively few studies have sought to test the role that younger children's appraisals of conflict play, specifically the extent to which they feel threatened and to blame, in explaining the relationship between awareness of conflict and later adjustment. Fewer studies still have explored the influence that younger children's understanding of the meaning of inter-parental conflict has on children's evaluations of the quality of other family relationships, and how these appraisals of multiple family subsystems might operate together to influence children's adjustment in the face of inter-parental conflict. This may be a particularly important question to address, based not only on the differences observed in children's social cognitive abilities, as highlighted in Chapter 3, but also based on the social and biological transitions which mark the move from childhood to adolescence (Cummings et al., 2000; Rutter, 1989a; Steinberg, 2005). In an attempt to address this lacunae in the evidence base, this study serves as an extension to the analyses presented in Study 1, by examining the role of children's appraisals of multiple family relationships in explaining the link between awareness of conflict and their adjustment in a sample of younger children.

Developmental changes in children's awareness and appraisal of inter-parental conflict

With respect to the inter-parental relationship, older children may be more aware of subtle expressions of conflict such as the silent treatment, which may largely pass undetected by younger children. In line with this, Younger & Boyko (1987) found that children between the ages of 6 and 9 years were more easily able to process information about others' aggression than their withdrawal, indicating that younger children may be more aware of overt discord rather than more covert expressions of inter-parental conflict. Whilst this may mean that younger children are shielded from some forms of conflict, it may also mean that they are less aware of subtle forms of resolution that may ameliorate any distress that exposure to conflict might cause. Indeed, Davies, Myers & Cummings (1996) found that young adolescent children were better able to correctly interpret inter-adult affect and determine whether conflict was well resolved in comparison to younger children aged 7-9 years, although an earlier study found that even young children (5-6 years) were able to infer resolution from incomplete information (Cummings, Simpson & Wilson, 1993). Grych, (1998) found that older children, aged between 10 and 12 years, were more sensitive to the content of the conflict than younger children, meaning that older children may be more likely than younger children, to detect low intensity conflict that nevertheless centres around a particularly contentious issue or an issue which has previously resulted in high intensity expressions of disagreement between parents. Thus, older children may effectively be exposed to more conflict than younger children.

Despite evidence suggesting that older children may be aware of a wider spectrum of destructive behaviours occurring between parents, findings indicate that children respond more negatively to marital disputes than do adolescents (Davies,

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Myers, Cummings & Heindel, 1999; Richmond & Stocker, 2007). Rather than an effect of exposure per se, this may be as a result of the way that children evaluate the meaning of conflict and their perception of their ability to cope with its occurrence (Davies et al., 1996; Grych, 1998). Several studies have found there to be a decrease in the negative appraisals that children generate in response to inter-parental conflict as a function of age, with each study indicating that children in the late stages of childhood appraise conflict more negatively than early adolescent children (Grych, 1998; Jouriles et al., 2000; Richmond & Stocker, 2007). The difference in children's appraisals across a relatively small age gap coincides with children's transition from concrete operational thinking to formal operations and thus it seems probable that developmental changes in children's cognitive abilities have a significant role to play in explaining the differences in children's detection of and attributions about marital conflict.

Younger children may be able to generate fewer and less effective problem solving solutions which likely increases the level of threat which they perceive to be associated with parents' conflictual exchanges (Cummings et al., 1991; Davies et al., 1996). Further, the greater reliance of younger children on parents as attachment figures and also as organisers of daily life may also heighten the level of threat that children, as opposed to adolescents may perceive, in the face of conflict (Furman & Buhrmester, 1992; Nikerson & Nagle, 2005). Also of consideration are the relatively deeper friendships which develop during adolescence and which may provide an important source of support during times of family instability, buffering children from the impact of conflict, by increasing their coping efficacy (Cantin & Boivin, 2004; Furman & Buhrmester, 1992; Hetherington & Stanley-Hagan, 1999; Wasserstein & LeGreca, 1996). Appraisals of self blame also seem to be influenced by

developmental level. Younger children may have a propensity to assume blame for parents' marital conflicts based on their egocentric way of thinking, which may prevent children from understanding that conflict may stem from reasons other than their own behaviour (Covell & Abramovitch, 1987; Jenkins & Buccioni, 2000). Younger children may be less able to make the distinction between spousal and parent roles, with understanding of the distinctiveness of these roles becoming more differentiated over time (Bretherton et al., 1990; Fu et al., 1988; Jenkins & Buccioni, 2000). This may compound the tendency of younger children to assume blame in that, by default, they interpret a parent's anger to be related to parent-child rather than spousal issues, and thus infer that they are in some way implicated in its cause. It is noted that children's perceptions of the causes of affect and behaviour become increasingly differentiated and sophisticated with age moving away from proximal, observable factors, such as their own behaviour, to more distal, intangible factors such as personality traits (Covell & Abramovitch, 1987; Miller & Aloise, 1989). Following this advance in thinking, older children may be better able to understand that conflict is caused by a clash of personalities, a particular personality disposition, or by issues specific to the inter-parental relationship rather than by their own behaviour.

In examining the association between appraisals of threat and self blame and indices of adjustment, Jouriles et al. (2000) found that although younger children reported overall higher levels of threat and blame, these appraisals were found to be more strongly related to the adjustment of children aged between 10 and 12 years than those of children aged between 8 and 9 years. This is in line with the prediction that older children's appraisals and responses show greater consistency owing to the development of particular cognitive styles (Turner & Cole, 1994). This finding may also represent the fact that high levels of perceived threat and self blame may in part

represent normative age-related cognitive constraints amongst younger children, whereas the same appraisals made by older children may represent aberrant cognitive processes or family conditions that are particularly likely to evoke such appraisals, and thus negative outcomes may be more likely (Jouriles et al., 2000).

Despite these findings, little work has tested the role that children's appraisals play in mediating the link between younger children's perceptions of inter-parental conflict and adjustment, focussing instead on children aged between 11 and 14 years (e.g. Dadds et al., 1999; Grych et al., 2003; Grych et al., 2000). Recently however, McDonald and Grych (2006) addressed this issue, using a revised version of the CPIC assessment tool that is more accessible to younger children (CPIC-Y; McDonald & Grych, 2006). The authors found children's appraisals of threat and self blame to mediate the association between both mother and child reports of conflict and internalising symptoms, but not externalising problems. Although some studies of older children have found appraisals to mediate the association with externalising problems (Buehler et al., 2007; Dadds et al., 1999; Grych et al., 2003), results have been much less consistent than those found for internalising symptoms. Grych and his colleagues (Grych et al., 2000; McDonald & Grych, 2006) suggest that whilst appraisals of threat and blame may be correlated with externalising problems, other processes such as modelling and disrupted parent child relations are primarily responsible for the development of these types of problems in the context of inter-parental conflict (Grych et al., 2000). This view is also echoed in tests of the emotional security hypothesis, which find that appraisals of parent-child security are more strongly related to externalising problems than are appraisals of the inter-parental relationship (Davies et al., 2002; Harold et al., 2004).

Children's differential understanding of inter-parental conflict as a function of age may have an impact on the way that older and younger children view their own relationship with their parents. Described in detail in the opening to Study 1, the family wide model proposes that children's evaluations of relations both between and with parents are important in communicating the effects of marital conflict to children and that the way that children evaluate the parent-child relationship is, in part, determined by the way in which they view the inter-parental relationship (Harold & Conger, 1997; Harold et al., 1997). In integrating the proposals of the cognitive contextual framework into this model, the findings of Study 1 showed that in line with the family wide hypothesis, conflict influenced children's adjustment through both children's evaluations of the inter-parental and parent-child relationship. However, children's externalising problems in the context of low level conflict were found to be influenced directly through appraisals of blame, whilst hostile inter-parental conflict was found to exert direct effects on children's internalising through appraisals of threat, in addition to an indirect effect through parenting. The finding that inter-parental conflict served to shape children's evaluations of the parent-child relationship but also exerted direct effects on children's adjustment, emphasises the significant role that children's understanding of events occurring *between* parents may have in determining children's evaluations of other family relationships, as well as adjustment directly.

Nevertheless, as these findings were derived from tests using an adolescent sample, it is not clear whether these results might be replicated amongst younger children. One consideration is the salience of parents in the lives of older and younger children. Pre-adolescent children are heavily reliant on parents to fulfil most, if not all attachment needs (Furman & Buhrmester, 1992; Nikerson & Nagle, 2005), whereas

adolescent children show a shift in social orientation away from parents towards peers (Larson, Richards, Moneta, Holmbeck & Duckett, 1996), with peers being the preferred option to meet some attachment needs; a trend that increases across adolescence (Furman & Buhrmester, 1992; Nikerson & Nagle, 2005; Paikoff & Brooks-Gunn, 1991). Therefore, it might be reasonable to expect that fears that the relationship with parents is likely to suffer as a result of inter-parental disagreements would be more salient amongst younger children. Further, younger children may also have difficulty in determining that inter-parental disagreement relates to marital, rather than parent-child issues (Jenkins & Buccioni, 2001), increasing the likelihood that effects of marital conflict may be conveyed solely through younger children's perceptions of parent-child relationship quality. Thus, in the case of younger children, appraisals of parenting might serve as the primary process variable through which conflict impacts on adjustment, with children's appraisals of threat and self blame simply serving to orientate children's views of the parent-child relationship rather than explaining unique variance in children's adjustment outcomes.

This conjecture is supported by a recent study undertaken by Walters et al. (2008) who examined the role of children's appraisals of inter-parental conflict and parent-child relations in accounting for the link between children's perceptions of inter-parental conflict and internalising and externalising problems one year later. Processes were compared across two cohorts of children separated by one school year. Children in the younger group were mostly aged between 9 -10 years whereas those in the older group of children were mostly aged between 10 -11 years. It was found that younger children's appraisals of the parent-child relationship influenced both internalising and externalising problems, with internalising also influenced by appraisals of threat. On the other hand, awareness and appraisals of inter-parental

conflict offered the only mechanism through which older children's symptoms were affected. These findings seem to suggest that the quality of parent-child relations may be a more potent predictor of adjustment for younger children, whereas older children's evaluation of the quality of relations between parents seems to be more closely linked to adjustment. This is in keeping with previous work, which found a stronger relationship between older children's appraisals of inter-parental conflict and adjustment relative to younger children (Jouriles et al., 2000), and also with the findings of Harold et al. (2007) who found that when considered together, adolescents' cognitions relating to the quality of inter-parental relations, and not those relating to the parent-child relationship offered the only mechanism through which academic attainment was influenced by exposure to conflict two years earlier. That Walters et al. (2008) found appraisals of threat to convey effects to older and younger children's internalising symptoms, suggests that the detection of danger and the feeling of being unable to cope is a potent influence on adjustment for children of all ages, despite older children's likely wider repertoire of coping skills. Indeed, Banjeree (1997) has shown that even infants are attuned to emotional expressions that signal varying degrees of threat. McDonald and Grych (2006) suggest that owing to its past evolutionary function, appraisals of threat play a role in influencing children's adjustment from a much earlier age. As well as reflecting more aberrant cognitive processing in older children, McDonald & Grych (2006) conjecture that attributions of blame require a higher degree of cognitive sophistication and thus may be more influential later in development.

The variation in process found by Walters et al. (2008) is particularly intriguing given that only a year in age separated the two cohorts of children. Thus, it might be argued that differences in children's social cognitive abilities would be

nominal. However, the cohorts of children considered fell either side of a time at which cognitive ability is noted to change substantially (Piaget, 1977; Selman, 1980). Nevertheless, whilst changing social cognitive abilities seems a plausible explanation of findings, it should be noted that the older children in this study experienced the transition from Primary to Secondary school, between the first and second waves of data collection. Thus, it may have been the stress associated with this that accounted for the differences in process, rather than differences in social cognitive ability per se. The inter-parental relationship may set the emotional tone of the family from the child's perspective and thus children experiencing change and pressure may be particularly vigilant for signs of family instability. The stability of the family is likely to be viewed as more closely related to the quality of inter-parental relations than parent-child relationship quality, explaining why appraisals of the inter-parental relationship and not the parent child relationship influenced the adjustment of older children. Nevertheless, this still represents an age-related transition that may contribute to differences in the way that older and younger children process information relating to family relationships, and serves to underscore Steinberg's (2005) thinking that cognitive development should be considered as it plays out in social context.

Only a few studies such as that undertaken by Walters et al. (2008), directly compare the role of indirect and direct processes in communicating the effects of inter-parental conflict to younger children (see also Stocker et al., 2003) and none of these have sought to compare the variation in process as a function of the level of conflict to which children are exposed. The present study attempts to address this issue.

The present study

This study employs a two wave longitudinal design to explore the role of children's appraisals of threat and self blame, emanating from exposure to inter-parental conflict and appraisals of the quality of parent-child communication, as mediators of the association between children's awareness of inter-parental conflict and their later internalising and externalising problems. A second aim of this study is to explore possible variation in processes as a function of the level of conflict to which children are exposed.

Drawing on evidence which suggests that younger children may be less able to detect more covert expressions of conflict and are less 'tuned in' to the topic of parental disagreement (Davies et al., 1996; Grych, 1998; Younger & Boyko, 1987), it was expected that awareness of low level conflict would not be associated with children's later appraisals of threat and blame. However, consistent with a spill over hypothesis (Erel and Burman, 1995), it was expected that even if not directly aware of inter-parental conflict, effects would be detected by children through subtle changes in the quality of parenting. Owing to younger children's stronger attachment to parents relative to older children, it was expected that even subtle shifts in children's perception of the quality of parenting would be related to both their internalising and externalising in symptoms. Therefore, consistent with the mechanism of effect illustrated in Chapter 2, it was expected that children's appraisals of low level conflict would be communicated to children's adjustment indirectly, through their perceptions of parenting.

Consistent with evidence suggesting that younger children feel more threatened and to blame for inter-parental conflict (Jouriles et al., 2000; Richmond & Stocker, 2007) than older children it was expected that high level conflict would be

positively related to children's appraisals of threat and self blame. For the reasons outlined above, it was also expected that children's awareness of more hostile inter-parental conflict would be related directly to their appraisals of parenting one year later. Based on the notion of the family wide model (Harold et al., 1997) that events occurring between parents prime children's expectation and appraisal of parent-child interactions, it was expected that appraisals of threat and blame would be related to appraisals of parent-child communication, indicating that children who feel more threatened and to blame for conflict appraise their relationship with their parents more negatively. In line with Harold's work (1997), appraisals of parenting were expected to be related to children's internalising and externalising problems. Therefore, children's awareness of hostile inter-parental conflict was expected to affect children's adjustment indirectly, whereby both awareness and appraisal of inter-parental conflict shape appraisals of parenting, which in turn are directly linked to adjustment.

In addition, consistent with the findings of Walters et al. (2008), it was expected that threat would offer an additional direct route through which hostile conflict would affect children's internalising symptoms. Appraisals of self blame were not expected to be directly linked to children's externalising problems based on conjecture that higher levels of self blame are normative in younger children, and may have a less significant impact on longer term adjustment (Jouriles et al., 2000).

The children included in this study were drawn from Primary Schools in South Wales and were aged between 9-11 years. This age group represented an ideal group with which to compare results derived in Study 1 using an early adolescent sample, owing to the fact that the majority of this younger group of children were unlikely yet

to have made the transition from concrete to formal operation thinking, and thus may demonstrate significant variation in the way that they interpret family interactions.

Method

Sample

These data derive from a two wave longitudinal study of 250 school children, their parents and teachers living in South and Mid Wales. The Study focussed on children's experiences of family and school life and their socio-emotional adjustment. Of the 250 children who had agreed to take part in the project, data were collected from 227 children and their families, representing a 91% response rate. Of these families, 78% provided data at the second wave of data collection. This study utilised data collected from 173 children who were present at both waves of data collection and who completed in full, the measures of inter-parental conflict, along with their teachers. The sample contained 72.8% of children who reported living with both biological parents, 11.6% reported living with their mother and stepfather, 12.2% of children were living in single parent households, 1.7% reported split residence between their mother and father and 1.7% reported living in 'other' family constellations. Whilst it is common practice for studies with a primary focus on inter-parental conflict to retain data from two parent households only, based on the need for a sufficient sample size to facilitate subgroup comparisons, the decision was taken to include data from all children who had provided complete data across inter-parental conflict measures of interest. This decision was based on the rationale that children from family types other than those with two resident parents were able to respond to these questions based either on current levels of conflict within their households, between for example, a parent and their partner, or based on conflict which was

ongoing between separated parents. The sample was predominately White European (98%) with the remaining small proportion describing their ethnicity as mixed heritage. Children were aged between 9 and 11 years at the first wave of data collection (M = 10.25, SD =.71) and the sample was comprised of 54% of boys and 46% of girls. Equal proportions of children were in years 5 and 6 at the first wave of data collection, meaning that at the second wave of data collection half of these children had made the transition to secondary school.

High and low conflict groups were created by performing a median split on the data, based on children's reports of inter-parental conflict. The low conflict group was comprised of 86 cases (girls = 47%, boys = 53%; M= 10.17years; SD=0.74) and the high conflict group was comprised of 87 cases (girls= 45%, boys = 55%; M= 10.32 years; SD=0.67). There was some variation across family composition with 80.2% of children in the low conflict group reporting that they lived with both biological parents, whilst 9.3% reported that they lived in two parent households containing a step-parent. 5.8% of children reported that they lived in single parent headed families, 1.2% responded that their time was split between parents living in different homes and 3.5% reported that they lived in some other family type. The high conflict group on the other hand comprised a smaller proportion of two parent families (65.5% two biological parents; 13.8% step-parent families), and a larger proportion of single parent families (18.3%) and split residency living arrangements (2.3%). There was a fairly even spilt of children in each school year across groups (Low: Yr 5, 52.3%, Yr 6, 47.4%; High Yr 5, 48.3%, Yr 6, 51.7%) and a similar proportion of children reporting that they had siblings (Low: 82.6% vs. High: 81.6%). However, as might be expected based on the breakdown of family type, a larger proportion of children in the

high conflict group reported that they had step siblings in comparison to the low conflict group (25.3% vs. 15.8% respectively).

Procedure

After receiving permission from school Head teachers, parents of children in school years 5 and 6 were informed of the aims and objectives of the study by mail and invited to participate in the project. Parents provided written consent for their children to take part in the study. Arrangements were made with schools for children to complete questionnaires during the course of the school day. Children were introduced to the aims and objectives of the study and full instructions for the completion of questionnaires were given by a member of the research team. Children were assured of the confidentiality of their responses and informed that at no time would their questionnaire be linked with their name. They were also informed that they were free to withdraw at any point during or after the study. Children answered questions relating to their psychological well being, their relationship with parents, inter-parental conflict and school related functioning and relationships. Upon completion of the questionnaires, a debriefing session took place with children where the aims and objectives of the study were reiterated and the opportunity provided to ask any questions relating to the nature of any aspect of the study. Children were also again reminded that their responses could be withdrawn from the study at any point in the future. Questionnaires were also provided for completion by each child's class teacher. For those children who had made the transition to secondary school the child's form tutor, who was likely to know the child best, was asked to complete the questionnaire. Questionnaires were numbered, enabling teachers to cross reference participant numbers with children's names (list held by school) in order that they

could complete questionnaires appropriately. Teachers provided details relating to children's academic attainment, application at school and children's adjustment.

Measures

Children's perceptions of inter-parental conflict

The conflict properties subscale of the Children's Perception of Inter-parental Conflict subscale (CPIC, Grych et al., 1992) was used to assess adolescent reports of inter-parental conflict. The subscale includes 17 items indicating the frequency, intensity and resolution of inter-parental conflict. It includes statements such as "I never see my parents arguing" (frequency) "my parents get really angry when they argue" (intensity); "even after my parents stop arguing they stay mad at each other (resolution)". Response options are "true", "sort of true" and "false". Two items relating to physical aggression were omitted due to concerns raised in seeking ethical approval for the study. Correlations between subscales ranged from between (r= .65 - .70) and were thus combined to create an overall index of destructive conflict properties. Items were recoded so that higher scores on the scale indicated conflict that was more frequent, intense and poorly resolved. The internal consistency score for this subscale was good (α=.92).

Children's appraisals of Threat and Self Blame

Children's appraisals of threat and self blame were assessed using the perceived threat and self blame subscales of the CPIC (Grych et al., 1992). Twelve items comprise the Threat sub-scale which includes items indexing the child's worries about the implications of the conflict and confidence in their ability to cope with conflicts for example "when my parents argue I worry what will happen to me" (threat) and "when my parents argue I can do something to make myself feel better" (coping). One item, "when my parents argue I worry one of them will get hurt", was

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omitted due to concerns raised during the process of receiving ethical approval. The 9 item Self Blame sub-scale assesses the degree to which children blame themselves for their parents' conflict and perceive conflicts as concerning child related issues. Items include "it is usually my fault when my parents argue" (self blame) and "my parents usually argue or disagree because of things I do". Both measures derived good internal consistency estimates (Threat, α=.85; Blame, α=.84).

Children's appraisals of negative parent –child communication

As was the case with the previous study, no one measure explicitly addressed the quality of communication between parents and children. Thus, questions were again selected from several measures addressing children's perceptions of the quality of parent-child relations. A total of 11 items were selected. One item was selected from the Relationship Satisfaction Scale subscale of Iowa Youth and Families Project Rating Scales: "How much do you talk to your mum/dad about things that you don't want others to know" (IYFP, Melby et al., 1993). Six questions were selected from the hostility/coercion sub-scale of the Iowa Youth and Families Project Rating Scales (Melby et al., 1993) including items relating to the frequency with which they are asked for their opinion "How often in the past month did your mum/dad ask for your opinion about an important matter" and the extent that parents and children argued when their was a difference of opinion "How often in the past month has your mum argued with you when you disagreed about something". Four items were also selected from the revised Child Report of Parental Behaviour Inventory (CRPBI; Margolies & Weintraub, 1977). Items included "My mum/dad makes me feel better after talking over my worries" and "My mum/dad doesn't talk to me very much". Items were recoded in order that a higher score represented more a more negative style of communication. Items were standardised at the item level and children's reports of

communication with mothers and fathers (r=.56, p<.01) were summed to give an overall index of the quality of parent-child communication. Children's reports for both mothers and fathers communication had good internal consistency (mothers, α=.76; fathers, α=.75), as did the combined measure (α=.84).

Internalising symptoms

Because children tend to be the best reporters of their own internalised states (Achenbach, 1991a), two subscales from the Youth Self-Report Form of the Child Behaviour Checklist (Achenbach, 1991a) were used to assess internalising symptoms. The first subscale to be used was the Anxious/Depressed subscale. This includes items such as "I cry a lot" and "I am afraid I might think or do something bad". The second subscale to be used was that tapping children's withdrawal from social relations and includes statements such as "I would rather be alone than with others" and "I am secretive or keep things to myself". Children rated their agreement with each statement on a three point scale ranging from "not true", through "sometimes true" to "very true". The subscales were combined to give an overall index of internalising symptoms. Each subscale demonstrated adequate internal consistency across both time points, with the combined subscale also showing good overall consistency (Anxious/depressed: α=.85; Withdrawn: α=.64-.67; Combined: α=.87).

Externalising Behaviour

This measure incorporated both child and teacher reports of externalising behaviour. Children completed the aggression subscale of the CBCL (Achenbach, 1991a) and Buss and Durkee's (1957) trait hostility measure of antisocial behaviour. Both measures obtained good estimates of internal consistency across both time points (CBCL: α=.85-.86; Trait hostility: α=.82-.86; Time 2). Teachers completed the Aggression subscale of the Teacher Report Form of the CBCL (Achenbach, 1991;

α=.96). All three measures were standardised at the item level and combined in order to give an overall estimate of externalising problems (α=.94). On examination, the distribution of this variable at Time 1 and Time 2 was found to violate assumptions of normality, and therefore in both instances the variable was square root transformed.

Results

Stages of analysis

As for the previous chapter, analyses were performed in stages, first using the total available sample, followed by the analysis of low and high conflict groups in order to facilitate subgroup comparisons of the theoretical pathways between the variables of interest. Sub-groups were created using a median split based on children's reports of how frequent, intense and poorly resolved conflict between parents tends to be. In order to compare the statistical magnitude of equivalent pathways across models, a variation of Fishers r to z transformation, as recommended by Paternoster et al. (1998) was utilised to compare unstandardised regression coefficients. Based on the central themes of this thesis attention is given over primarily to the discussion of results pertaining to low and high conflict models with analysis relating to the total sample used as a reference point from which to discuss the utility of categorising children's experiences of conflict, in order to gain a more nuanced understanding of how conflict effects children's adjustment.

Preliminary analysis

Means and standard deviations for all study variables, across the combined, as well as Low and High conflict groups are presented in Table 1. Comparison of mean scores across Low and High conflict groups revealed significant differences across all

variables of interest, with the exception of appraisals of blame, where the mean difference between groups attained only marginal significance. Mean scores across appraisal measures and symptom levels were higher in all cases for children in the high conflict group. As revealed by the previous study, a higher proportion of children reported extreme levels of inter-parental conflict in the High conflict group (high: 13% vs. low 0%) as well as clinical level symptoms at both Time 1 (internalising: 8% vs. 1%; externalising: 6% vs. 1%) and Time 2 (internalising: 7% vs. 1%; externalising: 6% vs. 4%), although these differences were most marked for children's reports on inter-parental conflict and internalising symptoms.

Table 1. Means and standard deviations across all study variables of interest

	Combined sample		Low Conflict		High Conflict		Mean difference
	M	SD	M	SD	M	SD	t
2006							
1. Perceptions of conflict	27.91	7.81	21.82	2.52	33.93	6.49	16.20**
2. Internalising	8.68	6.10	7.07	5.12	10.26	6.59	3.55**
3. Externalising	6.92	1.47	6.47	1.42	7.37	1.39	4.22**
2007							
4. Appraisals of threat	15.22	4.59	14.45	4.32	15.99	4.73	2.23*
5. Appraisals of blame	13.39	3.55	12.92	2.98	13.85	4.00	1.74[a]
6. Appraisals of parent-child communication	0.00	7.44	-2.69	9.09	2.66	7.85	2.53**
7. Internalising	8.14	5.89	7.02	5.15	9.25	6.39	2.53**
8. Externalising	6.91	1.51	6.48	1.42	7.33	1.49	3.90**

Note. Total sample, N= 173; Low conflict, N=86; High conflict, N=87

[a]p<.10; *p<.05; **p<.01.

Correlational analysis

Tables 2 and 3 contain all bivariate correlations for the variables assessed in these analyses. Table 2 contains those derived from the total sample. It can be seen that all theoretical constructs were significantly and positively correlated. Bivariate relations between variables in the low conflict sample are displayed in Table 3, below the diagonal. It can be seen that there was no significant relationship between children's perceptions of conflict and any of the Time 2 appraisal measures, or with children's Time 2 adjustment. Children's appraisals of threat, self blame and parent-child communication were all significantly inter-correlated and in turn related to children's adjustment. Intercorrelations for the high conflict group are presented above the diagonal in Table 3. Here it can be seen that children's perceptions of conflict properties were related to children's later externalising but not to internalising symptoms. Perceptions of conflict were also related to all appraisal measures. Children's appraisals of the inter-parental and parent-child relationships were associated with children's concurrent symptoms, although the relationship between appraisals of parent-child relations and internalising symptoms attained only marginal significance.

Table 2

Intercorrelations among all theoretical constructs for the total sample

	1	2	3	4	5	6	7	8
2006								
1. Perceptions of conflict	1							
2. Internalising	.34**	1						
3. Externalising	.32**	.44**	1					
2007								
4. Appraisals of threat	.30**	.45**	.22**	1				
5. Appraisals of blame	.28**	.23**	.23**	.54**	1			
6. Appraisals of parent-child communication	.41**	.29**	.30**	.36**	.41**	1		
7. Internalising	.23**	.74**	.29**	.47**	.27**	.30**	1	
8. Externalising	.31**	.34**	.49**	.30**	.25**	.38**	.42**	1

Note. N=173. **p<.01.

Table 3

Intercorrelations among all theoretical constructs for low and high conflict groups

	1	2	3	4	5	6	7	8
2006								
1. Perceptions of conflict	-	.27**	.20^a	.35**	.33**	.25**	.16	.21*
2. Internalising	.13	-	.33**	.47**	.25*	.19^a	.72**	.25*
3. Externalising	.07	.38**	-	.10	.20^a	.23*	.22*	.27*
2007								
4. Appraisals of threat	.13	.35**	.26*	-	.54**	.31**	.47**	.26*
5. Appraisals of blame	.17	.13	.20^a	.51**	-	.42**	.25*	.22*
6. Appraisals of parent-child communication	.14	.21*	.19^a	.37**	.34**	-	.18^a	.34**
7. Internalising	.10	.73**	.29**	.43**	.26*	.38**	-	.32**
8. Externalising	.02	.34**	.63**	.27**	.24*	.28**	.51**	-

Note. Low conflict, N=86; High conflict, N=87. Low conflict below the diagonal, high conflict above ^{a}p<.10; *p<.05; **p<.01.

Regression analyses

Inter-parental conflict, children's appraisals of inter-parental conflict and parent-child relations and internalising symptoms

The first set of analyses tested the role of children's appraisals of threat and self blame emanating from inter-parental conflict and appraisals of negative parent-child communication, in linking children's awareness of destructive inter-parental conflict to their internalising symptoms one year later. With respect to the full sample, preliminary analyses revealed that whilst the initial association between perceptions of conflict and internalising symptoms was significant (β=.23, p<.01), this dropped to non significance when children's earlier symptoms were controlled for (β= -.02).

This relationship was also statistically non significant when examined across Low and High conflict groups (Low: β= .01; High: β=-.03). As there was no initial association between Time 1 inter-parental conflict and Time 2 internalising symptoms, these data did not meet the criteria that Baron and Kenny (1986) described as necessary to define a mediational pathway. However, an independent variable can have an indirect effect on a dependent variable even if they are not correlated, it the independent variable influences a third variable, which in turn affects the dependent variable (MacKinnon et al., 2002).

Controlling for initial symptoms, the results contained in Figure 1 indicate significant associations between perceptions of conflict at Time 1 and Time 2 appraisals of threat (β=.17, p<.05), self blame (β=.23, p<.01) and negative parent-child communication (β=.28, p<.01). Time 2 appraisals of threat were related to concurrent internalising symptoms (β=.16, p<.01), indicating a direct effect of inter-parental conflict on later adjustment, through appraisals of threat. The stability in children's symptoms was strong and significant (β=.66, p<.01), with significant

associations also noted between Time 1 internalising symptoms and appraisals of threat ($\beta=.39$, p<.01) and self blame ($\beta=.15$, p<.05).
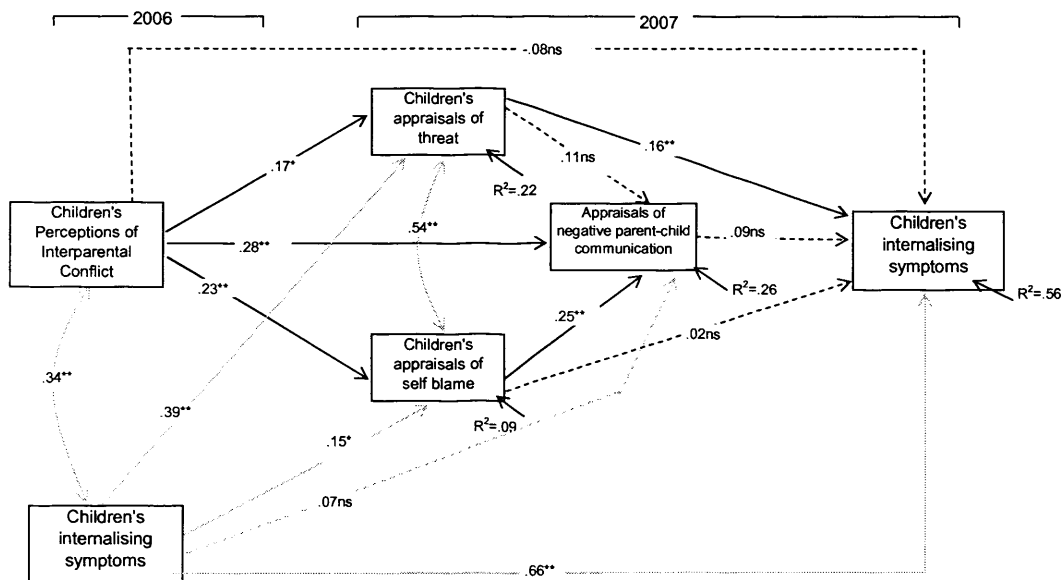

Figure 1. Association between adolescent perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and internalising symptoms for the combined sample [a]p<.10; *p<.05; **p<.01; [ns]not significant.

Results of the sub group comparisons (Figure 2, Panels A & B) revealed that in the case of Low conflict (Panel A), children's perceptions of conflict were not linked with either their appraisals of the inter-parental (threat: $\beta=.09$; blame: $\beta=.16$) or parent child relationships at Time 2 ($\beta=.07$), meaning that an indirect path from conflict to symptoms could not be traced through children's appraisals. An indirect path was apparent from Time 1 internalising to Time 2 symptoms through appraisals of threat (internalising-threat: $\beta=.34$, p<.01) and negative parent-child communication (threat-parent child communication: $\beta=.22$, p<.10), although the statistical significance of the association between threat and parent-child

communication was only marginal. As before the stability in children's symptoms was strong and significant ($\beta = .64$, p<.01).
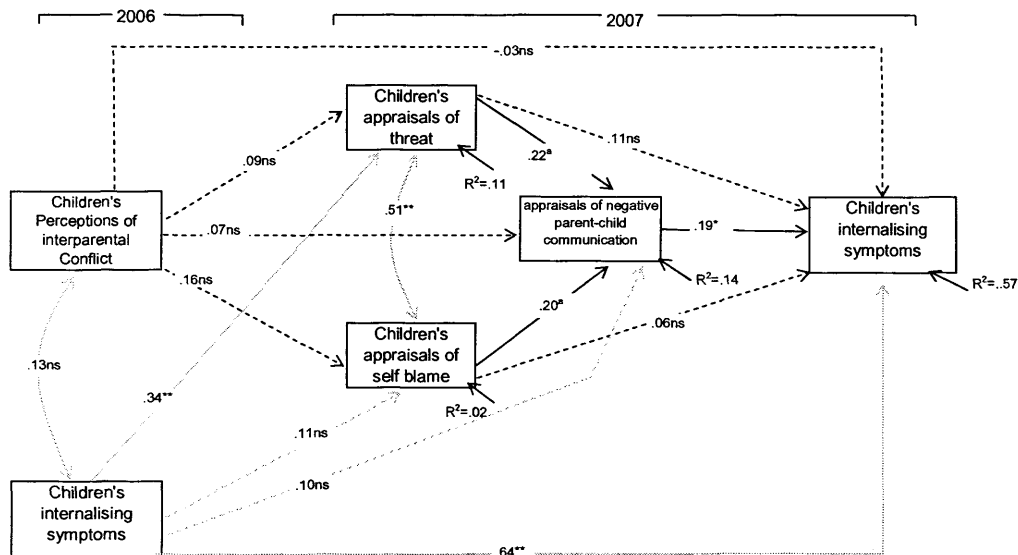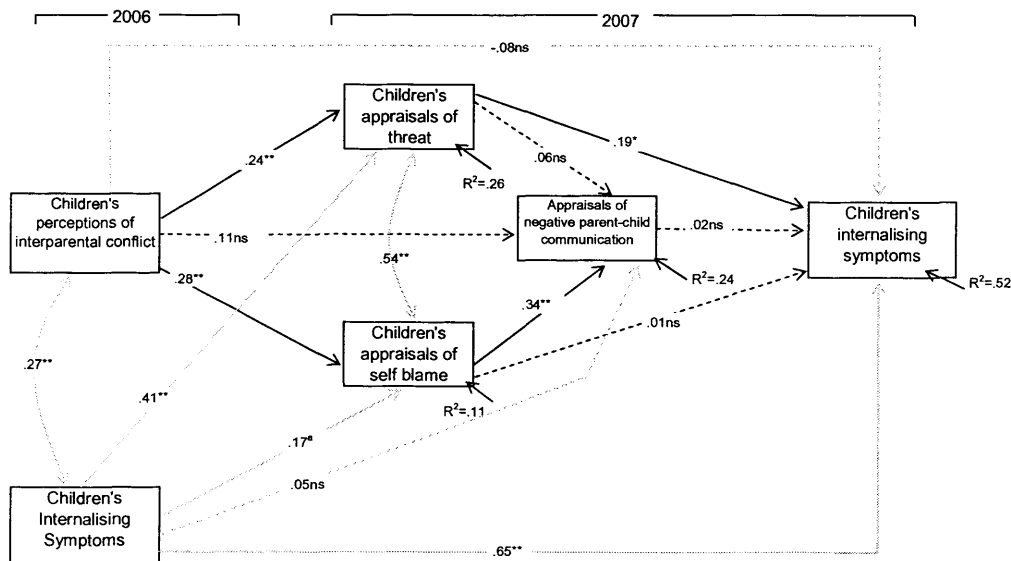
Panel A

Panel B

Figure 2. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and internalising symptoms for Low (Panel A) and High (Panel B) conflict groups, [a]p<.10,*p<.05 **p<.01, [ns]not significant.

With relation to the High conflict group, Figure 2 (Panel B) indicates that children's awareness of conflict at Time 1 were significantly related to their Time 2 appraisals of both threat (β=.24, p<.01) and self blame (β=.28, p<.01), although the relationship between conflict properties and appraisals of parent-child communication was non significant (β=.11). Appraisals of threat were associated with children's Time 2 symptoms (β=.19, p<.05), indicating a direct effect of children's awareness of conflict on their later internalising symptoms through appraisals of threat engendered by conflict. Comparison of theoretically meaningful pathways across models did not reveal any significant differences.

Inter-parental conflict, children's appraisals of inter-parental conflict and parent-child relations and externalising problems

With respect to children's externalising problems, preliminary analyses revealed that the initial association between children's perceptions of conflict and their later adjustment, was significant, even after taking children's Time 1 symptoms into account (β=.17, p<.05). In this case, data from the combined sample met Baron and Kenny's (1986) criteria for mediation. However, this was not the case when the sample was split (low: β=-.02, high: β =.17) meaning that in these instances any significant direct or indirect effects should be conceived of as 'linking' the effects of inter-parental conflict to children's externalising behaviour, rather than as mediating this association.

Analysis utilising the complete sample (Figure 3) showed that children's perceptions of conflict were related to their later appraisals of threat (β=.26, p<.01), self blame (β=.23, p<.01) and quality of parent-child communication (β=.26, p<.01). Appraisals of self blame were related to appraisals of parenting (β=.24, p<.01), which were in turn related to concurrent externalising behaviour (β=.20, p<.01). Therefore,

after controlling for initial symptom levels, conflict can be seen to have an indirect route of influence on later externalising behaviour through children's awareness and appraisal of inter-parental conflict and parent-child relationship quality. The subgroup comparisons showed a slightly different picture however.

As was the case with internalising symptoms, analyses performed on the low conflict (Figure 4, Panel A) group did not reveal any significant pathways between children's perceptions of inter-parental conflict and children's appraisals of threat (β=.11), self blame (β=.14) and parent-child relations (β=.07) nor between appraisals and adjustment (threat: β=.05; blame: β=.07; parent-child relations: β =.14). Symptoms at Time 1 and Time 2 were strongly related though, indicating a high level of stability in children's symptoms (β=.57, p<.01). Significant associations were also apparent between Time 1 problems and Time 2 appraisals of threat and self blame (β=.25, p<.01; β=.18, p<.10 respectively), although externalising problems were not related to children's later reports of parent-child relations (β=.01).

Figure 3. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and externalising problems for the combined sample [a]p<.10,*p<.05 **p<.01, [ns]not significant.

In contrast, analyses performed on the High conflict group (Panel B) revealed that children's perceptions of inter-parental conflict at Time 1 were significantly related to appraisals of both threat (β=.35, p<.01) and self blame (β=.30, p<.01), although not to children's reports of communication quality between themselves and their parents (β=.09). Blame was related to concurrent appraisals of parent-child relations (β=.31, p<.01), which were in turn related to children's concurrent externalising problems (β=.25, p<.01). These results indicate that in the context of high levels of perceived conflict, children's awareness of inter-parental conflict influences their later behaviour problems indirectly, through the joint activation of children's appraisals of self blame and the quality of parent-child relations. The association between Time 1 and Time 2 symptoms was marginally significant (β=.20, p<.10), the level of stability markedly lower relative to the other models. Additionally

children's earlier symptoms were not related to either their appraisals of inter-parental

conflict (threat: $\beta=.03$; blame: $\beta=.14$) or of the parent-child relationship ($\beta=.14$).
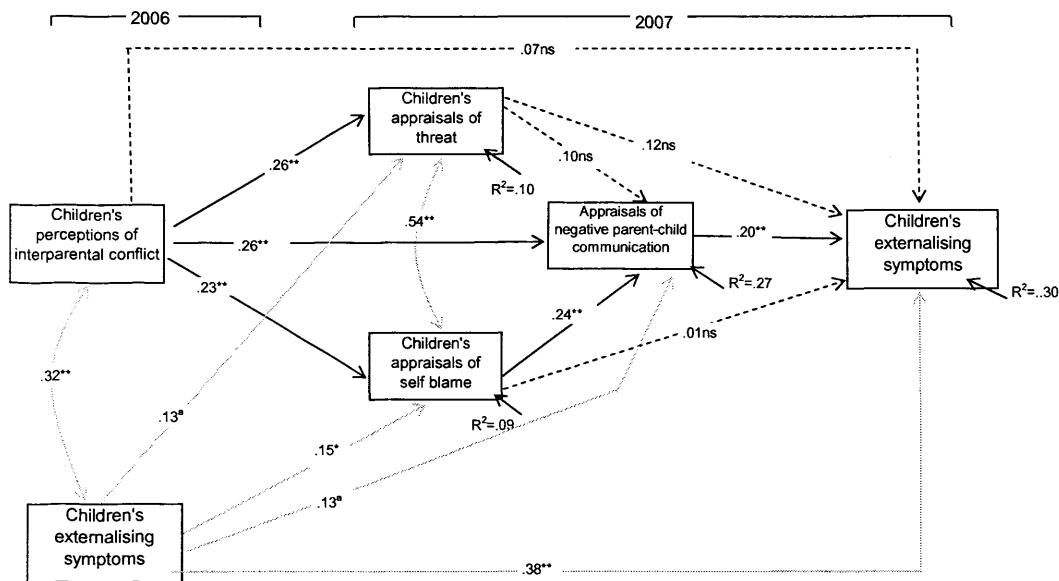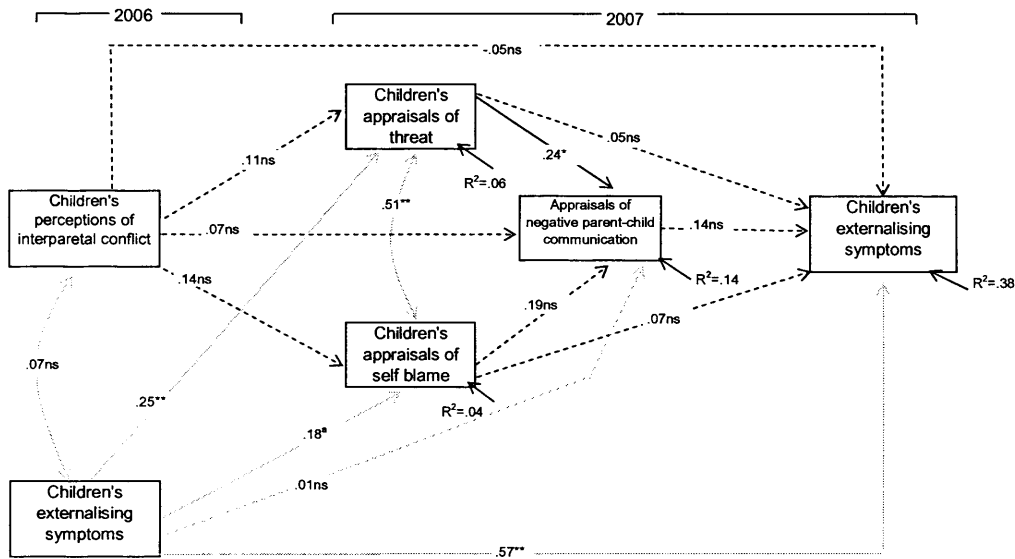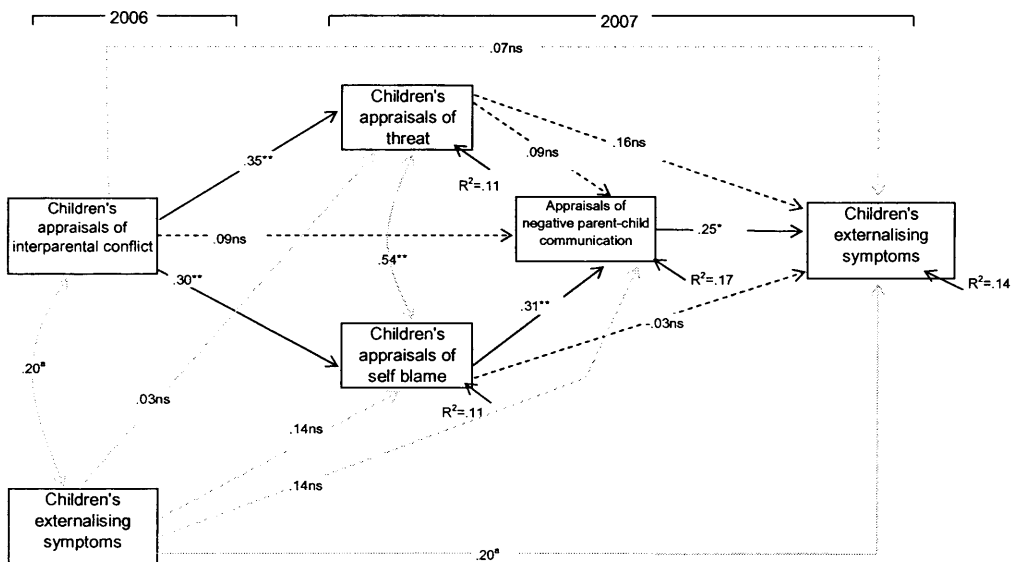
Panel A

Panel B

Figure 4. Association between adolescent perceptions of inter-parental conflict, appraisals

of threat, self blame, parent-child relationship quality and externalising problems for Low

(Panel A) and High (Panel B) conflict groups, [a]p<.10,*p<.05, **p<.01, [ns]not significant.

Taken together, these findings suggest that children's attempts to make sense of conflict in terms of its implications for themselves and their families play a key role in influencing their adjustment in the context of more hostile inter-parental conflict. These findings suggest that models focussing on children's understanding of family relationships are useful in elucidating the sequelae set in motion by younger children's awareness of highly hostile inter-parental conflict and more importantly, they highlight the significance of children's evaluations of inter-parental conflict in determining its effects.

Discussion

This study served as an extension to the analyses presented in Study 1 by testing the role of direct and indirect processes in explaining the link between awareness of inter-parental conflict and their adjustment in a sample of younger children. In a step towards understanding the utility of this process account of children's development across the spectrum of inter-parental conflict, analyses were undertaken to elucidate the interplay between appraisals of inter-parental conflict and parent-child relations in the context of children's perception of low and high levels of inter-parental conflict. Notably, the present study underscores the pivotal role of younger children's understanding of inter-parental conflict as integral to the processes (both direct and indirect) linking the effects of hostile inter-parental conflict to children's internalising and externalising problems. This in turn, may cast some light on the sequelae underpinning younger children's adjustment problems in the context of households marked by non normative levels of inter-parental conflict, including violence.

The role of children's appraisals in the context of low level inter-parental conflict

Interestingly, tests of the proposed model in the context of low conflict revealed that there were no apparent pathways that operated through the proposed intervening processes. This is at odds with the findings described in Study 1, where low levels of inter-parental conflict were found to affect children indirectly, through the joint effect of appraisals of threat and parent-child communication quality. Whilst it is difficult to draw concrete conclusions from non-significant findings, it is possible to speculate as to the theoretical and methodological reasons that might explain the lack of effects through the particular processes examined here, using a younger sample of children.

Given the fact that younger children are found to be less aware of subtle expressions of conflict (Hetherington, 1984; Hetherington et al., 1989; Younger & Boyko, 1987), and less 'tuned in' to the content of the conflict occurring between parents (Grych, 1998), it may be that they are largely unaffected by covert forms of discord and subtle expressions of hostility, such as the silent treatment or sarcasm that may be more salient to older children. The cognitive contextual framework (Grych & Fincham, 1990) contends that children only engage in attempts to understand the meaning of inter-parental conflict if it appears to be potentially problematic, either for the child themselves, their parents, or the family as a whole. As such it would be expected that conflict of which children are largely unaware, would fail to invoke children's attempts at secondary processing of its meaning. On the other hand, younger children may well be aware of parental quarrelling or disagreement but may not perseverate on its meaning, satisfied that the inter-parental exchange to which they have been party does not pose a threat to family or individual family member's functioning. In support of this, Easterbrooks et al., (1994) showed that in a laboratory

setting, toddlers evidenced little distress when parents, discussing actual conflicts, expressed disagreements in a mutually respectful manner using well modulated tones. Further, Cummings, Goeke-Morey and Papp (2004) found that whilst conflict concerning the integrity of the marital relationship predicted child aggression, that relating to everyday issues, such as social and work matters, did not. Emotionally neutral topics such as this may be more common in low conflict households, meaning that children are exposed to positive models of problem solving based on the discussion of issues that are not, in and of themselves, stressful to children.

Children, relative to adolescents, may also have a more limited understanding of the far reaching consequences that inter-parental conflict may have for other family relationships (Jenkins & Buccioni, 2000). They show a lesser propensity to ruminate about negative events than adolescents (Muris, Roelofs, Meesters & Boomsma, 2004) and thus, younger children may be less likely to 'mull over' the consequences of disruption in one family relationship for another. Therefore, it may be that even if younger children are aware of at least some degree of conflict between parents, they do not necessarily appraise it as having potential ramifications for the quality of parent- child functioning (Jenkins & Buccioni, 2000).

A further possibility is that children's awareness of low level conflict between parents, does in fact impact on their views of the parent-child relationship, but that this effect was not effectively captured owing to the way in which parenting was conceptualised across the studies contained within this thesis. Younger children's fears that conflict will impact on parenting may not be adequately reflected by a measure of parent-child communication. Parenting of younger children may tend towards being more directive and less mutual and thus, children may be less sensitive to qualitative changes in this facet of parenting. They may instead, be more concerned

with overt displays of affection and a parent's physical availability, which may be better captured by measures of rejection and withdrawal. On the other hand, the quality of communication, as a component part of the parent-child relationship, may be more salient to older children who are moving towards more adult-like relationships with their parents, where greater store is put on communication that is mutually respectful and reciprocal (Early, Gregorie & McDonald, 2002; McGue et al., 2005). In line with the conjecture that similar parenting practices do not necessarily produce the same effects at successive stages of a child's life (Cummings et al., 2000), it is possible that the quality of communication is less relevant in explaining the development of adjustment problems in younger children. In line with this developmental relevance hypothesis, several recent empirical investigations which have considered simultaneously appraisals of inter-parental and parent-child relations, have found that when appraisals of rejection and withdrawal are considered, effects do indeed operate through parenting for younger children (Walters et al., 2008), but not for older children (Harold et al., 2007). It should be noted however, that these studies considered the broad range of conflict expression, as opposed to the narrower operationalisation considered here.

These findings suggest that low level conflict may be less likely to elicit the types of appraisals in younger children which are found to be associated with older children's increased distress and impaired functioning over time (Buehler et al., 2007; Grych et al., 2003). Nevertheless, they should not be taken to suggest that low intensity expressions of conflict do not impact on younger children; rather it may be that processes other than those explored here may account for this link. Moreover, that appraisals of parenting were found here to be associated concurrently with younger children's internalising symptoms, suggests that in line with an indirect effects

hypothesis, children may potentially be affected by inter-parental conflict of which they are not aware through qualitative shifts in the parent-child relationship, of which they may be more cognizant. The finding that children's earlier internalising symptoms were linked to children's subsequent appraisals of threat, which in turn were associated with children' s appraisals of parent-child communication, suggests that this effect may be maintained by virtue of the effect that children's symptoms have on the way in which they appraise family relationships. This opens up the possibility that where symptoms are the product of previously high levels of inter-parental conflict, maladjustment is maintained by children's cognitive evaluations of family relationships, even in the event of objective decreases in parents' discord.

Children's internalising symptoms in the context of high levels of inter-parental conflict

In contrast, the results pertaining to the high conflict group suggest that children's appraisals of family relationships have a more central role to play in accounting for the link between children's awareness of more hostile forms of inter-parental conflict and their adjustment difficulties. Turning first to consider the results relating to children's internalising symptoms, children's awareness of high levels of inter-parental conflict appears to impact on symptoms of internalising directly, through the level of threat which children appraise as related to parents' arguments. This finding replicates the pattern of results found in other work that has examined the role of children's appraisals of inter-parental conflict as mediators of the inter-parental conflict - child adjustment link (Grych et al., 2003). These findings are also consistent with the handful of studies that have sought to examine the mediating role of cognitive processes amongst preadolescent children (McDonald & Grych, 2006; Stocker et al., 2003; Walters et al., 2008). Moreover, they replicate those presented in

Study 1, extending this work to show that the threat perceived to be posed by more hostile inter-parental conflict is important for explaining the adjustment of older *and* younger children, even after controlling for the quality of parent-child communication. That this effect was maintained after taking into consideration children's appraisals of the parent-child relationship is in line with previous work by Stocker et al. (2003), which found that threat served as a unique predictor of internalising over and above the effects of parenting, although in that case parenting also accounted for variance in children's internalising symptoms. These findings suggest that children who are exposed to high levels of conflict, which they perceive to pose a threat to themselves or their parents, may become sensitised to subsequent expressions of conflict, whereby conflict is expected to escalate and end badly (Cummings et al., 1981, 1984; J.S Cummings, 1989; El-Sheikh, 1994; 1997). Sensitised children may perceive even low level conflict to be threatening (Grych, 1998), which in turn serves to maintain levels of maladjustment.

The finding that hostile inter-parental conflict did not influence children through appraisals of the parent-child relationship, is at odds with the family wide model's contention that children's awareness and evaluation of inter-parental conflict primes children's expectations of parent behaviour (Harold & Conger, 1997; Harold et al., 1997; Harold et al., 2004). It might have been expected that hostile conflict would be particularly influential on younger children's appraisals of the quality of relations with their parents owing to the fact that parents likely play a greater role in fulfilling the attachment needs of preadolescent children (Furman & Buhrmester, 1992; Nikerson & Nagle, 2005), and children of this age relative to adolescents, report feeling closer to their parents (Litovsky & Dusek, 1985; Steinberg, 1987; Steinberg & Morris, 2001). One possibility is that younger children's appraisals of parent-child

relations become less salient in the context of hostile conflict given their developmental propensity to feel threatened and to blame for parents' arguments (Jouriles et al., 2000). In particular, when threat is great, younger children's processing of other information that is not directly relevant to the source of danger may be inhibited (Grych & Fincham, 1990; Medina et al., 2000). Further, older children may be more aware of the way in which discord between parents may play out in other family relationships (Jenkins & Buccioni, 2000), perhaps owing to more developed and stable schematic representations of relationships (Demorest, 1992; Miller, 1989; Turner & Cole, 1994), meaning that adolescent representations of the inter-parental and parent-child relationship may be more closely related. A further explanation for this pattern of findings, as mentioned previously, relates to the way in which parenting was conceptualised for the purpose of this study. Younger children's fears that conflict will impact on parenting may not be adequately captured by a measure of parent-child communication.

Overall, these findings suggest that when children's understanding of conflict, rather than simply their awareness of its occurrence, is taken into consideration, children's appraisal of inter-parental behaviour rather than of the parent-child relationship communicates the effects of highly hostile conflict to children's internalising symptoms.

Children's externalising symptoms in the context of high levels of inter-parental conflict

Children's appraisal of parent-child communication do seem to be important however, in understanding the manifestation of externalising problems in the context of highly hostile inter-parental conflict. Specifically, children's awareness of conflict was found to influence children's externalising problems one year later, indirectly,

though the joint effect of children's appraisals of self blame and parent-child relationship quality. Importantly, these findings echo those delineating the mechanism through which hostile conflict impacts on adolescent externalising problems, providing further confidence in the robustness of this effect, particularly as these findings appear stable across a potentially disrupted developmental period. It seems that hostile inter-parental conflict evokes younger children's beliefs that they are somehow blameworthy for their parents' rancour (Jouriles et al., 2000), which inevitably leads to the expectation that the quality of communication with parents who hold them accountable for unpleasant conflict is, or will be decreased. Poor communication between parents and children in turn may make it less likely that children furnish their parents with the type of knowledge (Crouter & Head, 2002), that makes it possible to keep track of behaviour outside of the home, increasing the likelihood that they will engage in delinquent and risky behaviour. Whilst this certainly may be one mechanism through which older children manifest higher rates of problem behaviour (Stattin & Kerr, 2000), younger children may have less opportunity to engage in delinquent behaviour as they spend less unsupervised time outside of the home. Nevertheless, the level and type of communication between parents and children may still represent an indicator of relationship quality, and a means through which parents are able to learn about their children's lives. Indeed, the level of knowledge that parents' have regarding their younger children's activities has been linked with behavioural competence in younger children (Crouter et al., 1990; Grundy et al., 2007).

One notable difference in the findings derived across older (Study 1) and younger (Study 2) samples is the extent to which children's secondary level appraisals are implicated in this indirect effect. Whereas children's awareness of conflict

influenced their appraisals of parent-child communication through appraisals of blame, older children's awareness of hostile inter-parental conflict had a direct impact on their evaluation of parent-child relations. As was outlined in the opening of this chapter, younger children seem to be developmentally predisposed to experience high levels of blame in response to their parents' conflicts (Grych, 1998; Grych & Fincham, 1990; Jouriles et al., 2000). Older children on the other hand, may have a better understanding of the various causes of conflict and a more differentiated view of the inter-parental and parent-child relationships, enabling them to appreciate that conflict between parents may be more to do with couple specific issues and parents' personality traits, rather than child related problems (Boxer & Tiask, 2003; Bretherton et al., 1990; Jenkins & Buccioni, 2000), decreasing the chance that adolescent children will blame themselves for its occurrence. Younger children are also more likely to assign blame based on consequence rather than intention; therefore they may be particularly likely to assume blame when their actions, even if unintentional, precede high level conflict (Covell & Abramovitch, 1987; Piaget, 1970).

Crucially, these results indicate that children's appraisals of self blame offer the only mechanism through which children's awareness of inter-parental conflict affects children's later appraisals of parenting. This finding is entirely consistent with the theoretical predictions of the family wide model (Harold et al., 1997), in that children's appraisals of the inter-parental and parent-child relationships operate jointly to convey the effects of conflict to adjustment. Further, these findings provide some extension to the early conception of the model (Harold et al, 1997; Harold & Conger, 1997) by demonstrating that children's understanding of conflict, rather than just their awareness of its occurrence, serves as a priming influence on children's appraisals of parenting. Children's appraisals of parent-child relationship quality then serve as the

gateway through which awareness and appraisal of conflict influence children's externalising problems. That children's appraisals of parenting seem to serve as the most proximal mechanism through which hostile conflict has its effect on both older and younger children, may go some way to explain why studies that have attempted to elucidate the role of children's appraisals of threat and self blame in accounting for the effects of domestic violence on children's externalising problems have found few effects through appraisals of inter-parental relations to externalising problems (Grych et al., 2000; Kerig, 1998a). Importantly however, these findings appear to suggest that whilst appraisals of inter-parental conflict may not impact directly on adjustment, they may serve to orient the way in which the parent-child relationship is evaluated, which in turn has implications for children's adjustment. Thus, a model integrating direct and indirect processes may provide a more comprehensive account of the development of children's externalising problems, in homes marked by high levels of destructive and hostile inter-parental conflict (Cummings & Davies, 2002; Harold et al., 1997; Harold et al., 2004).

Taken together these findings underscore the importance of considering the cognitive processes which link younger children's exposure to highly hostile inter-parental conflict to their psychological well being. These results provide partial support for the proposal that direct and indirect effects operate in concert to explain child adjustment in the face of inter-parental conflict, the central tenet of the family wide model (Harold et al., 1997); whereby children's appraisals of both the meaning of inter-parental conflict *and* the quality of parent-child relations were found to jointly influence children's externalising problems. On the other hand, children's appraisals of the inter-parental relationship rather than those relating to the parent-child

relationship seem to offer the primary route through which hostile inter-parental conflict impacts on children's internalising.

Integrative summary of results, limitations of the present studies and implications for prevention and intervention

The studies contained within this chapter served to examine the role that children's appraisals relating to the inter-parental and parent-child relationships play in communicating the effects of inter-parental conflict to children's later internalising symptoms and externalising problems. As well as examining the interplay between children's evaluations of multiple family subsystems, these interlocking studies sought to locate any differences in processes according to the level of inter-parental conflict to which children are exposed. Taken together, these results suggest that there is indeed some variation in the processes underpinning adjustment as a function of the level of conflict to which children are exposed, as well as some variation across older and younger children, particularly with respect to the role of children's appraisals in communicating the effects of lower level conflict to adjustment outcomes.

Whilst older children were found to be affected by lower level inter-parental conflict both directly and indirectly, younger children's appraisals of neither the inter-parental or parent child relationship served to link exposure to low level conflict to adjustment; although in the case of internalising, children's evaluation of parent-child communication was linked to concurrent levels of adjustment. Considered together, these findings suggest that adolescent children may be more sensitive to the spectrum of inter-parental behaviour than younger children. Older children may simply be more aware of more covert expressions of conflict or it may be that the increased demands and pressures experienced by adolescents at home and at school increases their

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vulnerability to inter-parental discord. Younger children may still be affected by lower level inter-parental conflict however through qualitative shifts in the quality of parent-child relations, even if they are ostensibly unaware of the occurrence of more covertly expressed inter-parental conflict. Alternatively, other aspects of children's appraisals relating to the inter-parental relationship, that were not considered here, may provide a link between awareness of conflict and appraisal of the parent-child relationship, or indeed a direct mechanism through which low level conflict impacts on adjustment.

Results pertaining to high conflict groups showed greater congruence across studies. Appraisals of threat linked exposure to more hostile inter-parental conflict to both older and younger children's internalising symptoms, although an indirect mechanism of effect, through parenting was observed for adolescent children. The continuity of findings relating to appraisals of the inter-parental relationship, across the older and younger samples considered in this chapter, suggests that children's appraisals of threat serve as a particularly robust mechanism through which more hostile forms of conflict may impact on children's immediate distress and longer term symptoms. Externalising problems on the other hand, seem to be more proximally influenced by children's appraisals of the parent-child relationship. This finding was consistent across studies, although the impact of inter-parental conflict on younger children's evaluations of parent-child communication quality was mediated by appraisal of self blame. This is in keeping with literature suggesting that younger children may be more likely to locate themselves as blameworthy owing to their less sophisticated causal reasoning and social perspective taking. These findings suggest that children's externalising problems, which as they are defined here reflect children's competence in interacting with others and conducting oneself in a socially

acceptable manner, are more directly influenced by parents' behaviour. Parent-child interactions may provide children with opportunities to model and practice appropriate styles of interaction (Cummings & Davies, 1994). Parents also serve as an important influence on children's ability to regulate their emotional reactions, coaching their children in how to deal with strong emotions and difficult situations (e.g. Fainsilber-Katz and Windecker-Nelson, 2006; Gotmman, Katz & Hooven, 1996; Saarni, Mumme, & Campos, 2006), an aspect of parenting that may be particularly dependent on high quality communication between parents and children. It seems intuitive therefore, that children's appraisal of the quality of parent-child relations in the context of hostile forms of inter-parental conflict may have a more direct impact on children's ability to interact with others than children's thoughts and feelings about the inter-parental conflict itself. However, it is crucial to acknowledge the role that children's awareness and appraisal of inter-parental conflict may play in orienting children's evaluations of the parent-child relationship.

Taken together these findings underscore the importance of considering the cognitive processes which link older and younger children's exposure to conflict, particularly that which is hostile in nature, to their psychological adaptation. Further, the general consistency in results with respect to processes underpinning adjustment in the context of more hostile inter-parental conflict is particularly noteworthy, given the potentially disrupted developmental period that marks the transition from childhood to adolescence, and which separates the samples considered in these studies.

Differences in the mechanisms underpinning children's adjustment across the low and high conflict subgroups examined here, suggests that analyses using a broad conceptualisation of conflict (i.e. ranging from constructive through to very

destructive) may not adequately capture the unfolding sequelae in either low or high conflict homes. Whilst these findings do not constitute examination of the role of children's appraisals in the context of inter-parental violence, it is proposed that processes explaining development in highly hostile homes will have a greater degree of overlap with those unfolding in violent homes, than those revealed when examining samples marked by wide ranging diversity in the amount of conflict experienced. These findings contribute to the development of a more nuanced understanding of how conflict affects children and further, may shed light on the mechanisms explaining children's development in families marked by inter-parental violence.

Limitations

The differences in the observed pattern of effects should be interpreted with caution however, for whilst interesting and potentially practically meaningful, comparison of theoretically significant pathways revealed only one statistical difference in the magnitude of coefficients across low and high groups across both studies (Study 1, threat-internalising). The lack of statistical difference between paths in low and high conflict models may be in be in part, accounted for by the relatively small samples used in these analyses, especially with respect to Study 2. Further, the way in which subgroups were derived, using a median split based on children's scores on the conflict properties scale of the CPIC (Grych et al., 1992) may also have contributed to non significant differences between pathways. The use of this technique by which to derive Low and High conflict groups can be problematic, based on the fact that the median value is necessarily dependent on the attributes of the sample in question (Whisman & McClelland, 2005). Therefore, it is possible to derive different results simply because the median happens to vary across different samples. This may be a particular concern when researchers wish to compare results across

samples. Aitken and West suggest that it is preferable to compare the top and bottom quartiles of a sample; however this was not possible here owing to the constraints of sample size. Further, in comparing the median values derived from the sample used in these analyses and that which was utilised in the previous chapter it was found that the values were in fact similar (26.5 vs. 25). Additionally the range of scores captured in both groups across samples was also similar.

Further, the model examined in the studies contained within this chapter proposes that the directional nature of the association between appraisals of marital and parent-child relations is such, that appraisals of inter-parental conflict serve as the architect of children's evaluations of the parent-child relationship. Yet, as appraisals of inter-parental and parent-child relations were assessed at the same time point, it is feasible that the relationship is in actual fact inverted or bidirectional in nature. Indeed, Grych & Cardoza-Fernandes (2001) suggest that hostility in the parent-child relationship may lead a child to perceive inter-parental interactions as more threatening and perceive the parent to be more blameworthy. This contention has gained some empirical support (Grych Raynor & Fosco, 2004; Schermerhorn, Cummings & Davies, 2008). Even so, evidence suggests children's appraisal of the quality of inter-parental relations more consistently exerts effects on appraisals of parent-child relations that the converse. In particular this was elegantly portrayed by Shelton and Harold (2004), who demonstrated that children's appraisals of marital conflict more consistently influenced effects on children's perceptions of parent-child security both within and across time, rather than the converse. This is in line with those who argue that the marital relationship sets the tone for the quality of other family relationships and children's appraisals of the inter-parental relationship serve

as the architect of their appraisals of the family system (Lindahl & Malik, 1997; Harold & Howarth, 2004).

A further criticism that may be levelled at these studies is the sole use of children as reporters of all theoretical variables of interest, which raises the possibility that the degree of association between constructs may be artificially inflated. However, as discussed in the previous chapter, attributional styles may crystallise over time, providing a lens through which relationships are appraised resulting in the formation of an attributional bias (Dodge, 2006; Kozhevnikov, 2007). Therefore, when the question for consideration is the degree to which such an attributional bias pervades the way in which multiple family relationships are evaluated, the use of a single reporter is entirely appropriate. Further, in comparing a model where children reported on their awareness and appraisals of inter-parental conflict against that where parents' reports of marital conflict were utilised, Grych et al. (2003) found little difference in the significance or magnitude of pathways, which affords greater confidence that these results are not merely a reflection of a self report bias.

Whilst these studies address potential differences in process as a function of children's age, consideration of other factors highlighted by the cognitive contextual framework, as important in understanding the impact of conflict on children, may be warranted in further tests of this model. For example, gender differences were not considered in these analyses although it has been shown that child gender may moderate the link between perceptions of conflict and appraisals and between appraisals and adjustment (Grych et al., 2003; Kerig, 1998a; Kerig, Fedorowicz, Brown, Patenaude, & Warren, 1998). The process through which both appraisals of conflict and parent-child relations activate children's psychological symptoms may also vary by gender, with Harold et al. (1997) finding differences in the mechanism

linking children's awareness of conflict to concurrent levels of internalising and externalising problems measured one year later. In addition, mothers and fathers may be differentially affected by marital conflict which may be borne out in their ability to parent effectively (Belsky, Youngblade, Rovine & Volling, 1991; Lindahl, Clements & Markman, 1997). Further still, the quality of relations between parents and children in the face of marital conflict may depend on both parent and child gender (e.g. McHale, 1994; Osborne & Fincham, 1996). Clearly then, parent and child gender may be an important contextual factor to consider in examining the way that children interpret both marital and parent-child interactions.

With specific reference to Study 2, the inclusion of family types other than two parent families potentially introduces a source of confound into this study. Research conducted across the past 50 years suggests that children with divorced and separated parents, compared to children with continuously married parents, consistently perform less well on measures of academic achievement, general conduct, psychological adjustment and social relations (Amato & Keith, 1991; Amato, 2000; Hetherington, Bridges & Insabella, 1998; Pryor & Rodgers, 2001). However, it is speculated that the impact of separation and divorce on children may be determined more by the level of conflict that exists between parents before, during and after the breakdown of the inter-parental relationship rather than the actual breakdown itself (Amato, 1993; Emery, 1982; Grych & Fincham, 1993; Harold & Murch, 2005). Indeed, studies indicate that the magnitude of the relationship between conflict and child adjustment is shown in many studies to be similar across divorced and non divorced families (e.g. Cummings & Davies, 1994; Vanderwater & Lansford, 1998); although a smaller number have found to the contrary, with a stronger link in divorced families (Forehand McCombs, Long & Brody, 1988) Further, models explaining the

mechanisms underpinning children's adjustment in intact families seem to generalise to explain the adjustment of children in divorced families or other family constellations (Fauber et al., 1990; Forehand et la, 1991; Conger et al., 2002). Therefore, it might be argued that the role of children's understanding of interparental relations, and appraisals of parent-child conflict, are just as important for understanding the aetiology of adjustment problems in this group of children, as they are for delineating problems in children from intact households. Nevertheless, it is recognised that children hailing from single-parent families may experience a wider range of adversity (Buchanan & Heiges, 2001; Hetherington et al., 1998) which may have a cumulative effect on family functioning and children's adjustment (Rutter, 1990).

Implications for prevention and intervention

Notwithstanding the limitations outlined above, these findings suggest that attempts to identify children who are at risk of experiencing psychological harm as a result of exposure to their parents' hostile marital behaviour, must take into consideration children's appraisals of multiple family subsystems. The results further suggest that attempts to ameliorate the level of risk posed to children by inter-parental conflict may be less effective if they focus their efforts entirely on strengthening the parent-child subsystem, as many of the available UK initiatives appear to promote (Harold & Murch, 2005; Webster-Stratton & Hammond, 1999). First, these results suggest that children's appraisals of inter-parental behaviour may continue to prime children's expectations of parents' behaviour, even if there is objective improvement in the quality of parent-child relations. This is supported by evidence that suggests that programmes to reduce children's behaviour problems are less effective when high levels of inter-parental conflict are ongoing (Dadds & McHugh, 1992; Dadds et al.,

1987). Further, the results presented here suggest that in instances of both low and high conflict, children's appraisals of inter-parental behaviour may exert direct effects on adjustment over and above effects that operate through the quality of the parent-child relationship. Thus, intervention programmes that pay a lack of attention to children's understanding of inter-parental interactions may represent a missed opportunity to address a primary source of influence on both children's understanding of parent-child interactions, and their adjustment. Intervention that serves to improve the quality of the inter-parental relationship, and as a result addresses children's negative appraisals relating to *both* the inter-parental and the parent-child subsystems, is likely to provide the most effective approach to intervention. Direct work on children's patterns of information processing, in tandem with this approach may be particularly effective where inflexible, negative styles of processing have been established. Children who are acutely sensitised to conflict may over react to any form of disagreement, even that which is constructively expressed (e.g. Weber & O'Brien, 1999) and thus in this instance, work to improve the way in which parents manage their conflicts, in combination with intervention to directly target children's appraisal processes may be the most effective way of improving children's well being. Targeting these cites for intervention may bring about real improvements in the way that parents parent, but also in the way that children evaluate the quality of the relationship both between their parents and with their parents, bringing about associated benefits in children's psychological health.

In returning to the core aim of this thesis, which is to consider the utility of models derived with respect to inter-parental conflict in aiding understanding of children's adjustment in the context of inter-parental violence, it is suggested that elucidating the processes through which hostile forms of conflict influence children's

adjustment may provide greater insight into the sequelae underpinning children's adjustment problems in the context of violent inter-parental relations. Nevertheless, whilst the use of normative data, to address the issue of process in non normative samples moves us closer to understanding the way in which more extreme forms of inter-parental conflict may impact on child functioning, more concrete conclusions can only be drawn by directly testing theoretical models using samples of children and parents who have actually experienced domestic violence. Chapter 5 directly speaks to this issue.

Chapter 5

Introduction

This study speaks directly to the core aim of this thesis, which is to explore the application of processes identified with respect to children's adaptation in the context of normative levels of inter-parental conflict, to understand children's psychological adaptation in the context of non normative levels of inter-parental conflict. Building on the previous chapter, the goal of this study is to examine the role of children's appraisals of threat, blame and parent-child relationship quality as a mechanism through which hostile forms of inter-parental conflict, including violence, may influence children's internalising and externalising problems.

In articulating the rationale for this study, the need for process orientated accounts of the way in which more serious forms of conflict may affect children is reiterated, along with the merits of drawing on perspectives developed to explain the impact of normative conflict on children. Following this, research that has sought to elucidate the role of children's appraisals of threat and blame in explaining the impact of violent conflict on children is described. This is followed by consideration of how children's evaluations of violent inter-parental relations may influence children's appraisals of the parent-child relationship.

A small but significant association has been demonstrated between children's exposure to inter-parental violence and children's adjustment problems, which has been documented in several recent reviews and published meta analyses (Kitzmann et al., 2003; Wolfe et al., 2003). As outlined in Chapter 1, children exposed to the conditions of domestic violence exhibit a variety of adverse emotional and behavioural problems, including increased internalising symptoms (Adamson & Thompson, 1998), externalising problems (Singer, Miller, Guo, Slovak, & Frierson,

1998), decreased cognitive functioning, including IQ deficits, (Koenen et al., 2003), social competence (Parker & Asher, 1987; McCloskey & Stuewig, 2001; McCloskey & Lichter, 2003), as well as an elevated risk of post-traumatic stress disorder (Graham-Berman & Levendosky, 1998a). Yet while outcome focussed work such as this abounds with relation to violent family contexts, process focussed research that aims to explain why violence affects children, is scant within this area (Davies et al., 2006; Fosco et al., 2007; Graham-Bermann, 2001; Harold & Howarth, 2004; Rivett et al., 2006).

The need for process orientated research using non normative samples

The finding, that around a third of children continue to function well in the face of their potentially toxic home circumstances, in particular highlights the importance of locating the factors which serve to communicate risk to children (Grych et al., 2000; Hughes & Luke, 1998). Further, the relevance of this research has taken on greater social and clinical significance in the United Kingdom of late in light of recent legislative changes (Adoption and Children Act, 2002), such that the definition of 'significant harm' has been extended to include 'impairment suffered from seeing or hearing the ill treatment of another'. An understanding of the processes through which inter-parental conflict and violence affects children is crucial to identifying who is most at risk and moreover, has significant implications for the development of evidence-based intervention programmes aimed at improving outcomes for children who suffer the ill effects of exposure to their parents' conflict. Highlighting the mechanisms that explain 'why, when and how' the developmental outcomes of children who witness inter-parental conflict may vary, is therefore of direct relevance to practitioners and policy makers working in the areas of child welfare and family justice, who work directly with families and children affected by domestic violence.

In the absence of clear articulation of the processes through which exposure to inter-parental violence affects children, researchers have been prompted to examine the utility of perspectives developed to explain the link between inter-parental conflict and child adjustment in order to explain why some children seem to be profoundly affected by inter-parental violence, whilst others continue to function relatively well. In particular, a body of work which has steadily grown over the last two decades underscores that the *meaning* of inter-parental conflict to children serves as a mediator of the link between exposure and child adjustment (Davies & Cummings, 1994; Emery, 1982, Grych & Fincham, 1990; Harold et al., 1997). This work has largely focussed on the role of children's evaluations relating directly to the inter-parental relationship, although more recently, attention has turned to consider the way in which children's understanding of multiple family relationships may determine adaptation in the face of conflictual inter-parental relations (Harold et al., 1997; Walters et al., 2008).

The family wide model suggests that children's appraisal of inter-parental conflict shapes children's evaluation of the parent-child relationship, which in turn serves as the gateway through which the effects of conflict are communicated to children (Harold et al., 1997; Harold et al., 2004). In initial tests of the family wide model, children's awareness of conflict frequency was examined as a source of influence on children's appraisals of parent-child hostility. Chapter 3, reviewed evidence underscoring the extent to which children perceive conflict to be threatening and themselves as blameworthy may serve as a mechanism through which children's awareness of frequent, intense and poorly resolved conflict impacts on children's adjustment (Grych et al., 2003). With this in mind, Chapter 4 described studies exploring the interrelationships between children's appraisals of threat and blame

relating to the inter-parental relationship and parent-child relations in the context of differing levels of conflict, in order to examine the process through which children's awareness of conflict may impact on psychological functioning. The findings emerging from the first study, suggest that children's appraisals of both the inter-parental and parent-child relationships are important in explaining the effect of conflict on children and moreover, that mechanisms of effect may vary to some degree according to the severity of conflict to which children are exposed. Based on evidence suggesting that children's understanding of family relationships is in part determined by children's level of cognitive development, the second study presented in this chapter sought to test the theoretical model using a younger sample of children. Interestingly, it was found here that children's appraisals of neither the inter-parental nor the parent-child relationship served as a means through which low level conflict affected children's adjustment 12 months later. The findings derived in the context of more hostile conflict concurred to some degree with those derived using an adolescent sample, although children's appraisals of the inter-parental relationship were found to offer the only mechanism through which severe conflict affected children's later internalising symptoms.

In attempting to answer questions as to the utility of research findings derived from non violent samples to children and families experiencing domestic violence, these findings represent a significant step forwards in that they serve to disentangle the processes which unfold in the context of broadly constructive expressions of inter-parental conflict from those unfolding in the context of broadly destructive conflict. As raised in Chapter 1, many studies utilise community samples that capture a broad spectrum of inter-parental behaviours, ranging from constructively expressed disagreements through to highly hostile behaviour (Davies et al., 2006; Fincham, et

al., 1994; Margolin et al., 2001) and it is argued throughout this thesis that by narrowing the operationalisation of conflict to that which is destructive only, identified mechanisms may have more in common with those that might operate to explain adjustment in more extreme family settings. However, whilst elucidating possible processes through which exposure to domestic violence may impact on children's well being, the conclusions which can be drawn from the earlier studies in this thesis are limited, owing to the fact that the samples used to derive these findings are drawn from community settings, where the level of inter-parental conflict to which children are generally exposed may be considered normative. In order to derive more concrete conclusions relating to the extent to which these findings generalise to hostile and violent family settings characterised by frequent and severe inter-parental conflict, tests of the model utilising non normative samples are required. Before turning to describe this study, which aims to test the theoretical model amongst a group of children exposed to inter-parental hostility and violence, a small body of research is described which has attempted to directly explore the role of children's appraisals as a mechanism through which exposure to violence may impact on children's psychological adaptation. Consideration is then given to the role that violent inter-parental conflict may play in shaping children's expectations and evaluations of the parent-child relationship.

The role of children's appraisals of parent behaviour in explaining variation in psychological adaptation in the context of inter-parental violence

Laboratory based studies have shown that simulated physical aggression is perceived as more threatening and distressing to children than non violent conflict, with more intense conflict being associated with perceptions of greater threat and conflict escalation (e.g. Grych & Fincham, 1993, Weber & O'Brien, 1999). What is

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more, children who have previously been exposed to higher levels of aggressive inter-parental conflict are found to perceive standardised audio taped disagreements between two adults as more threatening, reporting they would feel less able to cope effectively than do children with less experience of inter-parental aggression (Grych, 1998). Exposure to inter-parental aggression also invokes children's expectation that conflict will escalate and end badly (Grych et al., 2000).

Studies utilising shelter samples have shown that, similar to the marital conflict literature, variations in children's appraisals of threat and self blame are associated with variations in children's adjustment (Kerig, 1998a; Skopp et al., 2005; Jouriles et al., 2000). Differences in children's appraisals relating to inter-parental violence also seem to provide account of differences in siblings' adjustment. A study of sibling pairs found that siblings who felt more threatened by violent conflict experienced higher levels of internalising symptoms, and siblings who felt more to blame for inter-parental conflict also reported higher internalising symptoms as well as higher levels of externalising problems, as reported by mothers. Importantly, differences in children's reports of conflict properties were not associated with sibling differences in adjustment, suggesting that children's interpretation of the meaning and implications of events occurring between parents, may be more important in understanding their adjustment than the actual nature of the conflict itself (Skopp et al., 2005). In attempting to test the role of children's appraisals amongst a sample of children who had been exposed to extreme violence, Jouriles et al. (2000) recruited a sample of mothers and children from domestic violence shelters where the mother or child or both parties reported violence which included the use of a gun or a knife. Results revealed that even in the most extreme of circumstances where it might be expected that there would be less variation in children's experiences as compared to

normative samples, children's appraisals of inter-parental conflict varied tremendously. Analyses revealed that appraisals of self blame were associated with externalising, and both threat and blame, as well as children's fear of abandonment were associated with internalising symptoms (Jouriles et al., 2000).

Studies which utilise shelter samples are criticised however, based on the fact that most women and children do not seek the aide of domestic violence services meaning, those who do, perhaps comprising a unique group, in turn limiting the application of these findings to other populations (El-Sheikh et al., 2008). Indeed, there has been recent call to examine the effects of inter-parental aggression and violence on children using community samples, as well as those drawn from women's' refuges, in order to overcome some of the confounds that may characterise clinical samples (National Institute of Child Health and Human Development, 2002, as cited in El-Sheikh et al, 2008). Notwithstanding, two studies employing samples characterised by varying degrees of inter-parental violence are shown to have produced similar results. Using a community sample, where rates of violence were relatively low, Kerig (1998a) found that appraisals of threat mediated the impact of inter-parental violence on boys' anxiety, whilst blame mediated the relationship between violence and girls internalising symptoms. Congruent with these findings, Grych et al. (2000) found that children's appraisals of threat and blame mediated the concurrent association between children's perceptions of frequent, intense and poorly resolved inter-parental violence and their internalising symptoms. Data for this study were collected from a shelter sample. Interestingly, neither study found effects through appraisals with respect to children's externalising problems, as has been found in some community studies (Buehler et al., 2007; Dadds et al., 1999; Grych et al., 2003), although the link between appraisals and externalising is noted to be less

consistent even here (McDonald & Grych, 2006). The similar findings across these two studies are particularly noteworthy owing to the fact that one study sample was drawn from a community setting, where the levels of violence were relatively low (Kerig, 1998a), and the other was drawn from a collection of shelters (Grych et al., 2000), where rates of violence were likely to have been higher (Johnson, 1995). This suggests that results may in fact generalise across samples of children who have experienced different rates of violence.

Taken together, these studies provide the first indication, that findings from the marital conflict literature may generalise to some extent to violent family environments, and that the meaning that children attach to parents' behaviour towards one another may serve as a mechanism through which extremely hostile forms of inter-parental conflict impact on children's psychological health, especially their internalising symptoms. Still, lacking from these accounts is articulation of the way in which awareness and appraisal of violent inter-parental conflict may inform children's expectations and representations of other family relationships, and the role that these appraisals jointly, play in the process underpinning children's psychological wellbeing in the context of violence.

Children's expectations of parenting may be particularly influenced by the occurrence of highly hostile conflict owing to the fact that children may be more easily caught in the cross fire, and angry conflict may be more likely to spill over into the parent-child dyad (Appel & Holden, 1998; Erel & Burman, 1995). Evidence suggests that children living in violent homes are subject to greater levels of mothers' and fathers' controlling and coercive behaviour and harsh forms of discipline (Holden, Stein, Ritchie, Harris & Jouriles, 1998; Margolin et al., 2003; Margolin, John, Ghosh & Gordis, 1996). In its extreme form, punitive harsh parenting may

warrant a definition of child abuse. Violent inter-parental conflict in particular, has been linked with an increased incidence of child abuse (Appel & Holden, 1998). For example, in their large-scale survey of a nationally representative sample, Straus and Gelles (1990) identified couple violence as a significant factor that predicted physical child abuse, and differentiated abusive from non-abusive parents. McGuigan and Pratt (2001) also determined that domestic violence during the first 6 months of child rearing more than tripled the likelihood of physical child abuse occurring within the first 5 years of a child's life, beyond the effect of ten other risk factors associated with maltreatment. It is not even the case that co morbidity between inter-parental violence and physical child abuse is confined to families in which the woman is subjected to escalated forms of violence (beatings, injury with weapon). Tajima (2002) noted that more minor forms of abuse (slapping, pushing or throwing something) were associated with a 150% increase in the likelihood that parents would engage in physical child abuse.

Other aspects of parenting may also be affected by violent inter-parental conflict. For example, McCloskey, Figuerdo and Koss (1995) reported that inter-parental violence was related to children's reports of lower levels of parental warmth and nurturance, although in conflict with these findings Holden et al. (1998) found little difference in levels of maternal warmth and emotional availability, as reported by mothers. However, Holden et al.'s (1998) observational data did reveal that whilst battered women did not differ greatly from the comparison group on their self-reports of behaviour, they were in fact found to attend less to their children and experienced more conflicts with their children. Therefore, the possibility arises that although battered women report they remain emotionally and physically available to their children, this may not actually be the case. This was highlighted in a second study

carried out by Holden et al. (1998) which found that whilst both battered and comparison mothers shared the belief that it was important to be available to their children at times when children were distressed, battered women reported that there were two or three occasions per month on which an argument had upset them so much they were unable to provide comfort to their children. This was in contrast to the comparison group of mothers who indicated that this was almost never the case. With these findings in mind, children may have good reason to expect that hostilities between parents may impact on the quality of the relationship with their parent.

Less is known about fathering in violent households although some recent evidence suggests that fathers who are physically aggressive to their spouses demonstrate lower levels of empathy towards their children (Margolin, Gordis & Oliver, 2004). A further interesting finding is that the link between exposure to violent inter-parental conflict and children's adjustment may be moderated by the affective quality of the relationship that children have with their mothers' partner. Skopp, McDonald, Jouriles & Rosenfield (2007) found that whilst a warm relationship with mothers was found to attenuate the link between exposure and children's externalising problems, the opposite effect was found for fathers, where the relationship between exposure and externalising was stronger when children reported the relationship to be higher, not lower in warmth. This is suggestive of greater identification with fathers or father figures with whom the children have a close relationship (Bandura, 1977), although inconsistent with predictions of social learning theory this relationship was not stronger for boys than girls. A further factor to consider when exploring father-child relationships in domestically violent families is the biological relatedness between father and child. Hetherington, Henderson & Reiss (1999) finds relations between step parents and children to be less warm and involved than those between

the same parent and their biologically related child. Further, rates of physical abuse by step fathers on step children have been found to be 7 times higher than the abuse of biological children by fathers. Most significantly, the homicide rate for step fathers is 100 times higher than for biological fathers (Daly & Wilson, 1996; Wilson, Daly & Weghorst, 1980). The presence of children in the home who are not biologically related to the male partner also increases women's risk of being victimised (Daly, Singh, & Wilson, 1993).

The link between children's appraisals of inter-parental conflict and those of parenting may also reflect the efforts of children exposed to inter-parental violence to make sense of family events rather than veridical portrayals of the quality of parent-child relations. Inter-parental violence may be particularly likely to shape children's expectations relating to parent-child interactions owing to the schematic representations of inter-parental relations that child hold, which may be used to guide processing of parent-child interactions (Grych & Cardoza-Fernades, 2001). Chapter 3 notes that schemas that are accessed frequently as a result of repeated exposure to frightening conflict may become chronically accessible (Grych & Cardoza-Fernades, 2001; Guerra, Husemann & Spindler, 2003), and thus the way that children exposed to inter-parental violence may appraise the inter-parental and parent-child relationships may be particularly closely related. With the use of a narrative task Grych, Wachsmuth – Schlaefer, & Klockow (2002) investigated the proposition that children exposed to inter-parental aggression may express more negative perceptions of their mothers, as well as the inter-parental relationship. Results revealed that children drawn from agencies serving battered women portrayed mothers in their stories as less nurturant, affectionate and authoritative, but did not view them as more aggressive, rejecting or neglectful. Further it was found that inter-parental aggression

and father-child aggression had additive effects on children's representations of mothers, where children whose fathers' engaged in mother and child directed aggressive behaviour portrayed their mothers less positively. Additionally, in a small group of children who were witness to their parents' violent marital behaviour, Sternberg, Lamb, Greenbaum, Dawud, Cortes & Lorey (1994) found that children did not distinguish between perpetrating and non perpetrating parents. These findings suggest that children's representations of inter-parental and parent-child relations may be interrelated and that representations of inter-parental behaviour may colour children's evaluations of the relationship they have with both parents.

Bearing this in mind, children who appraise conflict as more threatening may be more likely to expect to be the targets of parents' hostility (Harold et al., 1997). Similarly, children who feel that they are to blame for causing conflict, or who feel blameworthy for not being able to prevent its occurrence (Fosco et al., 2007) in the first place, may also expect consequences for the quality of parent-child relationships. Based on the reasoning that children appraise inter-parental violence as especially threatening, and may be more likely to assume blame for its occurrence at some level, it might be expected that children's representations of family relationships may be more strongly interrelated in hostile families. Further, based on this rationale, that children feel more threatened and blameworthy for hostile conflict between parents, it might be expected that children's appraisals relating to the inter-parental relationship may also communicate effects of exposure to high levels of conflict directly to adjustment, over an above any mechanism that may operate through appraisals of parenting. The findings described in Chapter 4 suggest that this may be particularly the case with respect to children's internalising symptoms. With reference to adolescent children (Chapter 4, Study 1), a direct effect through appraisals of threat

was found to operate, in addition to an indirect from children's awareness of conflict through children's appraisals of parenting. In contrast, appraisals of threat offered the only mechanism through which younger children's (Chapter 4, Study 2) exposure to hostile inter-parental conflict affected children's symptoms. Children repeatedly exposed to parents' hostile exchanges may become sensitised to the expression of conflict, undermining their ability to regulate their levels of emotional arousal (Cummings & Davies, 1994; El-Sheikh, 1997). This in turn may increase the risk of children's internalising symptoms such as anxiety, depression and posttraumatic stress symptoms. Importantly, children exposed to high levels of inter-parental hostility are shown to become sensitised to conflict expressed between adults and children as well as interadult conflict (El-Sheikh, 1997), suggesting a generalised sensitisation effect, rather than that which is limited to a specific relationship

The absence of an indirect effect through children's appraisals of parenting on children's internalising symptoms in Study 2 suggests that inter-parental conflict may be especially threatening and dysregulating for younger children, perhaps owing to their fewer coping options and their greater reliance on parents as primary attachment figures. The cognitive contextual framework (Grych & Fincham, 1990) suggests that high levels of arousal may be particularly disruptive to younger children's ability to process information relating to inter-parental conflict, although these results suggest that in the face of hostile conflict, children may be motivated to process information relating to inter-parental behaviour and disregard information relating to the parent-child relationship. In line with this, Medina et al. (2000) demonstrated how, following exposure to simulated conflict, children exposed to high levels of family hostility showed enhanced task performance in comparison to those exposed to lower levels of conflict; a result the authors suggest of a narrowing of the attentional field in the wake

of the increased arousal, that is associated with appraisals of threat (Derryberry &
Tucker, 1994).

Present study

Whilst the findings of the previous studies contained within this thesis
represent the use of normative data to address questions of process in non normative
samples, the results provide only a suggestion of the role that children's understanding
of family relationships may play in communicating the effects of more severe inter-
parental conflict to children. In order to address this issue, the present study sets out to
explore the role that children's appraisals relating to the inter-parental and parent-
child relationships play in explaining the link between exposure to hostile and
aggressive inter-parental conflict and negative child outcomes. A cross sectional
design was used to assess the linkages between children's reports of frequent, intense
and poorly resolved conflict, children's appraisals of threat, self blame and the quality
of parent-child communications and internalising and externalising problems across
two groups of children; those exposed to very low levels of inter-parental
disagreement and those exposed to extremely severe levels of inter-parental hostility.

Given that the rates of conflict reported by the low conflict group in this study
were extremely low, it was expected that there would be no relationship between
children's awareness of conflict and their appraisals of threat or self blame, nor their
appraisals of parent-child relationship quality. This is consistent with findings
suggesting that younger children are less aware of low level expressions of inter-
parental conflict (Davies et al., 1996, Younger & Boyko, 1986). With respect to the
high conflict group, it was hypothesised that consistent with a sensitisation effect (El-
Sheikh, 1997), children's internalising symptoms would be affected directly through
their appraisals of threat. This effect has been documented in several other studies

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using non normative samples (Grych et al., 2000; Kerig, 1998a) and is also consistent with studies assessing relations in community samples (Grych et al., 2003). In line with Harold's findings (Harold & Conger, 1997; Harold et al., 1997), children's appraisals of inter-parental conflict were not expected to be related directly to children's externalising problems. Instead, it was hypothesised that children's awareness of hostile inter-parental conflict would be related to children's appraisals of threat and blame, but that children's appraisals of blame would be associated with children's evaluations of parenting. Parenting in turn was expected to serve as the most proximal mechanism influencing children's externalising problems. The lack of predicted relations between children's appraisals of inter-parental conflict and externalising is consistent with the initial proposals of the cognitive contextual framework which suggests that children's appraisals of inter-parental conflict may play a larger part in explaining children's internalising symptoms, and is in keeping with other studies that have found parenting to be more influential than appraisals of inter-parental conflict, in predicting the externalising problems of children across families marked by normative and more hostile forms of conflict (Stocker et al., 2003; Walters et al., 2008).

Method

Sample

Data collected from mothers and children were utilised for the purposes of this study. The data set from which results were derived was obtained from two sources. First, a subset of data were derived from the 227 families who participated in the first wave of the community based study described in Study 2 of the previous chapter. This larger sample was predominately White European (99%) and was comprised of 53%

boys and 47% girls. Forty nine percent of children were in Year 5, the penultimate year of primary school and 51% were in Year 6. The mean age of children was 10.28 years (SD = .72). The mean age of mothers was 37 years (range 29-46 years). Seventy percent of children lived with both biological parents, 12% with their mother and step father, 14.5% lived with their mother only, 1% with their father, and 3% had split residency between parents. As in the previous study, children who provided complete responses across the measures of conflict properties and threat and self blame were retained for the purpose of this study, irrespective of the family type from which they hailed.

From this larger group, cases were selected based on children's scores on the conflict properties subscale of the CPIC (Grych et al., 1992). Those children scoring in the lowest 30% of the sample were selected to represent the low conflict group (n=67). This group comprised 54% boys and 46% girls who were aged between 9-11 years (M: 10.12 years). Mothers were aged between 30-48 years (M: 39.88 years). Eighty one percent of children lived with both biological parents, 8% with their mother and step father, 6% with their mother only and 4% reported split residency between parents. Eighty five percent of children reported having siblings. 14.3% of children reported that they had step siblings.

Children whose scores fell into the top 20% of the community sample were selected to represent the high conflict group (n=52). Children were aged between nine and 11 years with the mean age being 10.38 years (SD=.66). Mothers of the children in this group were aged between 29-48 years (M = 38.52, SD = 4.79). Slightly over half of the children comprising this sub sample were boys (55.8%). 63.5% of children reported that they lived with both biological parents and 7.7% lived with two parents, one of whom was a step parent. 26.9% of children lived in single parent families and

1.9% reported that they lived in some other family type. 86.5% of children reported that they had siblings and 30.8% of the group reported that they had step siblings.

For the purpose of this study, data were also collected from three services targeting women and children experiencing domestic abuse. Two of the three domestic violence agencies had as their focus, adult female survivors of domestic abuse, with one providing primarily refuge accommodation and the other, broader based multi-agency intervention. The third agency had a focus on therapeutic intervention for children who had been exposed to domestic abuse. Based on the fact that contact was made by a liaison person linked to each agency it was difficult to record how many mothers and children were actually approached to take part in the study, however 32 mothers with children in the stipulated age range agreed in principle to participate in the study by returning a consent form to the agency with which they were engaging. From this number, data were collected from 21 mother and child pairs, representing a response rate of 66%.

All mothers and children reported being White British. Children were aged between 6-15 years with the mean age being 9.7 years (SD =1.98). Mothers were aged between 29 and 46 years with the mean age being 37.16 years (SD = 5.80). Forty eight percent of the sample was comprised of boys and 52% girls. Sixty two percent of children lived with their mother only, 24% of children lived with both biological parents and 14% of children lived with their mother and step father. Ninety percent of children reported having siblings and 52% of children reported having step siblings.

These data, drawn from the clinical setting, were combined with the high conflict cases selected from the community sample to comprise a high conflict group representing the spectrum of children's experiences of hostile and violent inter-parental conflict (n=73). This enabled sub group comparisons to be made between the

process underpinning children's adjustment in the context of very low conflict households, with those found to unfold in more hostile family settings, which included high levels of verbal and physical hostility. The age range of this combined group was much wider owing to three children in the clinical sample being 12 years or older. Ages ranged from six years to 15 years ($\underline{M}$: 10.19 years). Mothers ages ranged from 29-48 years ($\underline{M}$: 38 years).The sample comprised 53% boys and 47% girls. Fifty two percent of children lived with both biological parents, 10% with their mother and stepfather, 37% lived with just their mother, and 1% had split residency. 89% of children had siblings and 38% reported that they had step siblings.

Procedure

Procedural information relating to the collection of community data is reported in Study 2 of Chapter 4. Data from mothers and children exposed to domestic violence were collected from three agencies in Cardiff, all with a specific focus on aiding the victims of domestic violence and their children. The primary focus of two of these agencies was on the adult victims of domestic abuse, whereas the focus of the third was specifically on children exposed to domestic violence, although work is also carried out with children's parents also. In the first instance, workers from each of these agencies were nominated to serve as the liaison person between mothers and children accessing the service and the research team. It was felt that initial contact by a worker from within the agency would minimise the level of obligation that mothers and children would feel to take part in the study, further the worker was able to bypass any families who were in 'crisis', whereby an incident had recently taken place prompting their contact with the service. In approaching mothers whose children were eligible to take part in the study, the liaison worker verbally informed mothers about the aims and objectives of the study and asked if they wished, along with their son or

daughter, to participate. It was explained that a researcher would contact them by phone to arrange an appointment to complete questionnaires. In instances where the mother expressed concern about being contacted in this manner, no further contact was made. On agreement to participate, mothers were given a consent form to complete which was handed back to the liaison worker. Each mother was then given the contact details of the principle researcher. Any mothers who were unsure of their participation were given a consent form and a written overview of the project, along with the contact details of the researcher. They were invited to complete the form and hand it back to the liaison worker if they decided to participate at a later date. On the receipt of a completed consent form, the liaison worker informed the research team. The researcher then made contact with each potential participant to arrange an appointment for the completion of questionnaires. Questionnaires were completed on the premises of each agency. Mothers and children completed their questionnaires separately with a member of the research staff on hand to provide assistance if necessary. Some mothers were receiving outreach support in their own homes and where this was the case, arrangements were made for mothers and children to complete questionnaires during the course of a normal support visit, with the liaison worker on hand to provide assistance.

Measures

Whilst the core battery of measures used to collect data from community and clinical settings were largely similar, in several instances measures were truncated for the purposes of data collection in the clinical setting. This meant that for the purposes of this study, only questions that were asked of both samples could be used to compute subscales, meaning that in some instances the full scale or subscale was not

utilised. For this reason, descriptive statistics are not directly comparable with the studies described in Chapter 4.

Children's awareness of inter-parental conflict

Children sampled from domestic violence agencies completed the shorter CPIC-Y (McDonald & Grych, 2006). This measure is a modified version of the original CPIC measure that has been designed for use with younger children or children with poorer reading ability. In this adapted version of the measure, statements have been modified in order to simplify language and eliminate double negatives in order to aide younger children's understanding. The conflict properties scale contains 11 statements to which children responded on the same three point scale as utilised in the original scale. Children were asked to respond in terms of the adults with whom they lived. As the measure differed between samples an overall score reflecting the degree to which conflict between parents was frequent, intense and poorly resolved was computed using the nine statements that were presented to both samples. These included "I never see my parents arguing or disagreeing"; "After my parents stop arguing they are friendly towards each other". The statements pertaining to physical violence included in the intensity scale were only presented to the domestic violence sample and therefore were not used to compute the overall score. Items were reversed score so that a higher score reflected conflict that was more frequent, intense and poorly resolved. The internal consistency score for this subscale across the community and clinical samples was good (α=.85; α=.92 respectively).

Children's appraisals of threat and self blame

Children from the domestic violence sample completed the shorter versions of these scales included in the CPIC-Y (McDonald & Grych, 2006). Six items assess

children's appraisals of threat and fear, for example "I get scared when my parents have disagreements" and five items assess children's appraisals of blame, for example "It's usually my fault when my parents argue". Five items assessing threat and four items assessing blame were common across both versions of the measure. Items were matched with corresponding items in the community sample. Both measures derived good internal consistency estimates (Threat: community, α=.87, clinical α=.81; Blame: community α=.80, clinical α=.75).

Children's appraisals of negative mother –child communication:

Children's reports pertaining to their mothers only, were utilised for the purposes of this study. Ten of the items comprising this measure in the previous study were common across both data sets, although the item taken from the IYFP rating scales (Melby et al., 1993) 'how much do you talk to your mum about things that you don't want others to know' was omitted. Whilst the internal consistency of this composite measure was acceptable in the case of the community sample (α=.76) it was lower in the clinical sample (α=.60)

Internalising symptoms:

The same two subscales from the Youth Self-Report Form of the Child Behaviour Checklist (Achenbach, 1991a) used in Study 2 of Chapter 4 were used to assess internalising symptoms. The first subscale to be used was the Anxious/depressed subscale. This includes items such as "I cry a lot" and "I am afraid I might think or do something bad". The second subscale to be used was that tapping children's withdrawal from social relations and includes statements such as "I would rather be alone that with others" and "I am secretive or keep things to myself". Children rated their agreement with each statement on a three point scale ranging from "not true", through "sometimes true" to "very true". The subscales were

combined to give an overall index of internalising symptoms. Internal consistency scores across subscales and composite scales were good (Anxious/depressed: community $\alpha=.84$, clinical $\alpha=.90$; withdrawn: community $\alpha=.66$, clinical $\alpha=.76$; composite scale: $\alpha=.87$; $\alpha=.92$).

Externalising problems

It was not possible to obtain teacher reports in the case of the clinical sample, thus for the purpose of this study the measure of children's externalising behaviour was comprised of children's and mothers' reports of externalising problems. Children completed the aggression subscale of the CBCL (Achenbach, 1991a; community $\alpha=.84$, clinical $\alpha=.95$) and Buss and Durkee's (1957) trait hostility measure of antisocial behaviour (community $\alpha=.79$, clinical $\alpha=.87$). Mothers completed the aggression subscale of the Parent Report Form of the CBCL (Achenbach, 1991; community $\alpha=.82$, clinical $\alpha=.85$). All three measures were standardised at the item level and combined in order to give an overall estimate of externalising problems (community $\alpha=.86$, clinical $\alpha=.93$). On examination, the distribution of this variable was found to violate assumptions of normality, and was therefore square root transformed.

Results

Stages of analysis

In the first instance, mean scores across all variables of interest derived from the high conflict community group and the clinical sample were compared. Second, regression analyses were performed on low and high conflict samples. The significance of theoretically relevant pathways were tested using a variation of Fisher's r-z transformation (Patternoster et al. 1998).

Preliminary analysis

Comparison of the high conflict community and domestic violence samples

Comparison of mean scores across the variables of interest for the high conflict community sample and the domestic violence sample (see Table 1) revealed that children did not differ in their reports of conflict properties, appraisals of threat, self blame or symptom levels, although significant differences were apparent across mean scores relating to appraisals of parenting. Children drawn from the community scored higher on the measure of parent-child relationship quality, indicating a style of communication that was more negative than that reported by children in the domestic violence sample.

Table1. Comparison of mean scores across all study variables of interest for community and clinical samples.

	High conflict community sample (N=52)		Domestic violence sample (N=21)		Mean
	M	SD	M	SD	t
2006					
1. Perceptions of conflict	20.74	2.73	19.43	6.03	.10
2. Appraisals of threat	11.47	3.41	10.44	3.29	1.18
3. Appraisals of blame	5.73	2.07	5.29	1.71	.85
5. Appraisals of parent-child communication	4.15	8.10	1.14	4.55	3.75**
6. Internalising	3.23	1.15	3.52	1.52	.89
7. Externalising	7.58	1.29	7.58	2.18	.00

Note. **p<.01.

Mean and standard deviation scores for low and high (clinical and community) conflict groups across all study variables are presented in Table 2. Comparison of scores across low and high conflict groups revealed significant differences across all variables of interest where, without exception, scores for the high conflict group exceeded those derived from the low conflict sample. Fifteen percent of the children in the high conflict group obtained scores on the CPIC conflict properties scale indicating exposure to severe levels of conflict, whereas none of the children in the low conflict group reported this degree of conflict. A proportion of the children in the high conflict group also reported internalising and externalising symptoms indicative of clinical level problems (2 SD above the total sample mean, internalising: 5%; externalising: 11%), although none of the children in the low conflict group reported such severe symptoms.

Table 2 Comparison of mean scores derived from low conflict and high conflict samples

| | Low conflict (n=67) | | High conflict (n=73) (community +DV) | | Mean difference (low vs. high conflict) |
	M	SD	M	SD	t
2006					
1. Perceptions of conflict	10.69	1.00	20.36	3.97	20.13**
2. Appraisals of threat	8.18	3.04	11.17	3.38	5.49**
3. Appraisals of blame	4.39	.82	5.60	1.97	4.82**
5. Appraisals of parent-child communication	-2.48	4.51	2.54	7.63	4.79**
6. Internalising	2.37	1.02	3.31	1.26	4.82**
7. Externalising	6.29	1.12	7.58	1.58	5.59**

Note. **p<.01.

Correlational analysis

Table 3 contains all bivariate correlations for the variables used in these analyses. Bivariate relations between variables in the low conflict sample are displayed below the diagonal. It can be seen that children's perceptions of the degree to which conflict was frequent, intense and poorly resolved were associated with children's concurrent externalising behaviour but not with their internalising symptoms. Perceptions of conflict were further, marginally related to appraisals of parent-child communication, although not to appraisals of threat and self blame. Of the appraisal measures, only self blame and parent –child communication were marginally related. Appraisals of threat and quality of parent-child relations, but not blame, were linked with internalising symptoms. Appraisals of threat and blame were significantly associated with concurrent externalising problems. Further, appraisals of parent-child relations were marginally related to externalising problems.

Intercorrelations for the high conflict group are presented above the diagonal in Table 3. Here it can be seen that children's perceptions of conflict properties were not related to within time measures of children's adjustment. Children's perceptions of conflict were related to children's reports of threat relating to inter-parental conflict, although not to blame or parent-child relationship quality. All appraisal measures were positively correlated with concurrent levels of internalising and externalising.

Table 3. Intercorrelations between all study variables of interest for Low and High

conflict groups.

	1	2	3	4	5	6
2006						
1. Perceptions of conflict	-	.34**	.13	.13	.12	.11
2. Appraisals of threat	.17	-	.34**	.31*	.34**	.22[a]
3. Appraisals of blame	.16	.16	-	.51**	.34**	.32**
4. Appraisals of parent-child communication	.25[a]	.11	.23[a]	-	.24*	.43**
5. Internalising	.05	.30*	.13	.29*	-	.41**
6. Externalising	.25*	.27*	.33*	.21[a]	.57**	-

Note. Low conflict, N=67; High conflict, N=73

Regression analyses

Inter-parental conflict, children's appraisals of inter-parental conflict and parent-child relations and internalising symptoms

Results of subgroup comparisons relating to children's internalising symptoms can be seen in Figure 1. In both instances the concurrent association between children's perceptions of conflict and internalising were non significant, and thus these data did not meet the criteria for mediation (Baron & Kenny, 1986). However, for the reasons outlined in previous chapters, it is still possible for a third variable to serve as an intervening mechanism that links an independent and dependent variable, even in the absence of a direct association (MacKinnon et al., 2002). Panel A indicates that children's awareness of low conflict was not significantly associated with appraisals of threat, self blame or parent-child relations. Therefore, children's appraisals of family relationships did not provide a mechanism though which low

level conflict influenced concurrent internalising symptoms. These results concur with those of the previous study.

In contrast, with respect to the high conflict group, Panel B of Figure 1 shows that children's perceptions of conflict were related only to appraisals of threat (β=.34, p<.01). Appraisals were in turn significantly related to symptoms (β=.25, p<.05), indicating that children's appraisals of threat serve as a means through which children's awareness of highly hostile conflict is communicated to their concurrent internalising symptoms. These findings therefore indicate that in the context of hostile and violent inter-parental conflict, children's appraisals of inter-parental behaviour offer the only mechanism through which awareness of conflict influences children's concurrent internalising symptoms.

Inter-parental conflict, children's appraisals of inter-parental conflict and parent-child relations and externalising problems

Moving to consider the subgroup comparisons relating to children's externalising problems, it was found that whilst there was a significant association between awareness of conflict and externalising behaviour in the low conflict group (r=.25, p<.01), this was not the case with respect to the high conflict group (r=.11), meaning that whilst these data met the first criterion for mediation (Baron & Kenny, 1986) with respect to the low conflict group, in the case of the high conflict group, they did not. Results pertaining to the low conflict group are shown in Figure 2, Panel A. In line with the results relating to internalising, presented in the previous study, children's awareness of low level conflict was not related to appraisals of family relations.

Panel A
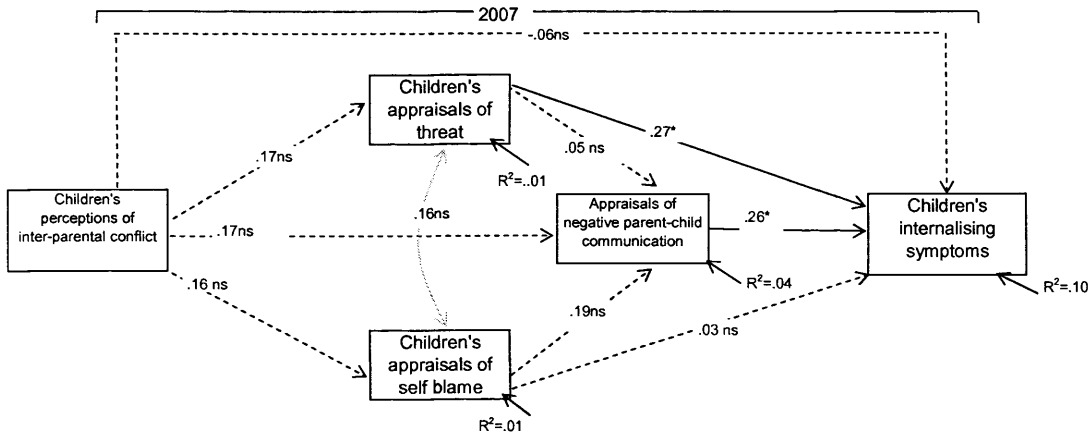
Panel B

Figure 1. Association between children's perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and internalising symptoms for low (Panel A) and high (Panel B) conflict groups, [a]p<.10,*p<.05 **p<.01, [ns]not significant.
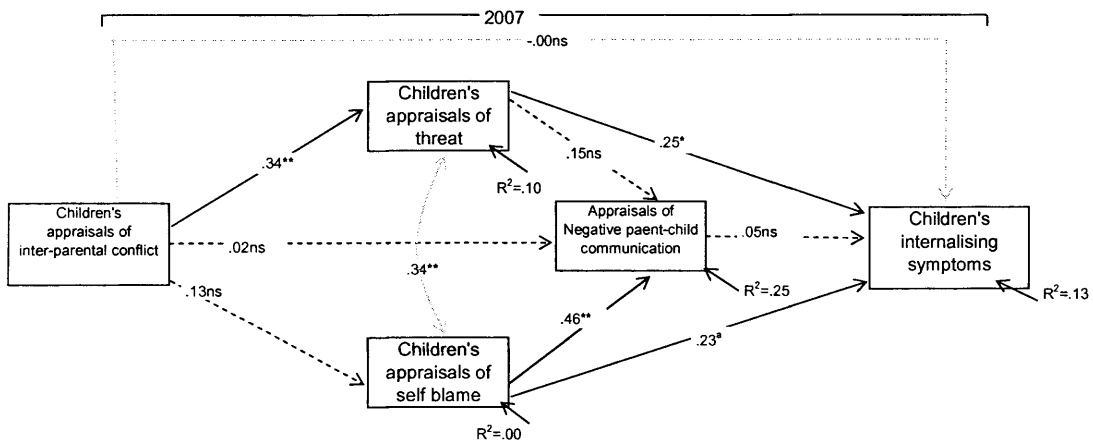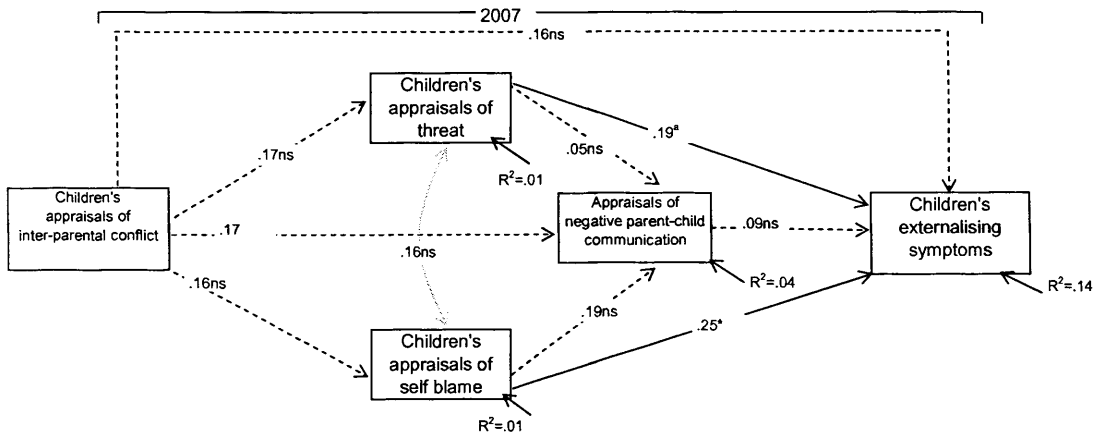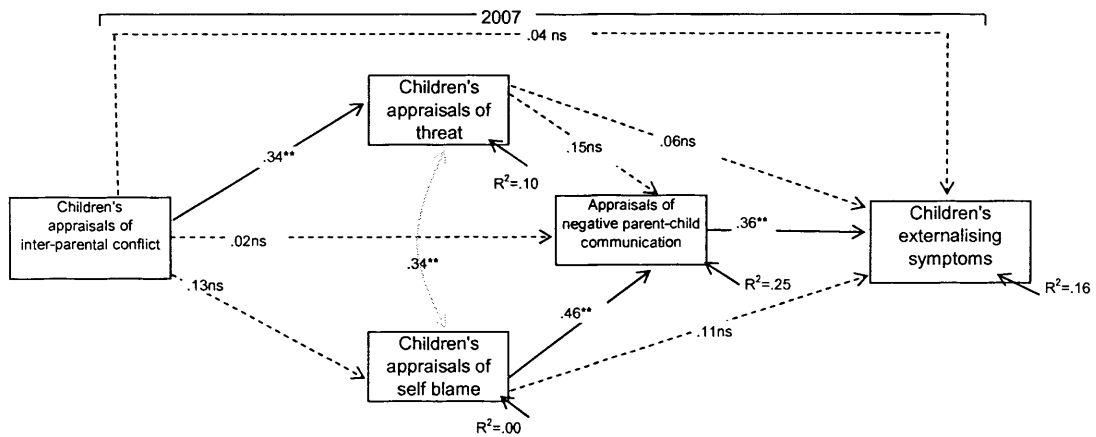
Panel A

Panel B

Figure 2. Association between adolescent perceptions of inter-parental conflict, appraisals of threat, self blame, parent-child relationship quality and externalising problems for low (Panel A) and high (Panel B) conflict groups, [a]$p<.10$,*$p<.05$, **$p<.01$, [ns]not significant

The results derived from the high conflict group, presented in Figure 2, Panel B, show that children's awareness of conflict was related to children's appraisals of threat ($\beta=.34$, $p<.01$), although there was no association between conflict and children's appraisals of blame or parenting. Children's appraisals of blame were associated with parenting ($\beta=.46$, $p<.05$), and children's appraisals of parenting were in turn linked to adjustment ($\beta=.36$, $p<.01$). However, conflict was linked to neither blame or parenting, and thus appraisals did not serve to indirectly link children's awareness of hostile and violent conflict to their concurrent externalising problems.

As in the previous study, comparison of equivalent pathways across low and high conflict models did not reveal any significant differences.

Discussion

This study builds on the previous work contained within this thesis in that it tests the hypothesis that children's appraisals of family relationships have a role to play in accounting for the effects of non normative levels of inter-parental conflict and violence on children's adjustment. This represents movement towards identifying whether theoretical accounts developed to explain the impact of inter-parental conflict on children can be generalised to explain the manifestation and maintenance of children's emotional and behavioural problems within the context of more serious inter-parental conflict. The study was undertaken in two parts, the first being to compare the mean scores pertaining to the study variables of interest across the group of children exposed to hostile inter-parental conflict (which may or may not have included violence) drawn from a larger community sample and a group of children exposed to inter-parental violence. This served to locate differences or lack thereof in children's appraisals and adjustment across the two groups of children. The second

part of the study involved examination of the processes through which high levels of inter-parental conflict and violence may affect children, comparing the results with a sample selected based on reports of much lower levels of discord.

Comparison of high conflict community and clinical samples

The comparison of mean scores across all study variables of interest was extremely revealing. Results indicated that the high hostility community group reported comparable perceptions of conflict destructiveness, threat and self blame and internalising symptoms to those children who had been exposed to domestic violence. Likewise, mothers and children reported similar levels of externalising problems across groups. Importantly, these non significant differences were obtained even though mothers in the clinical sample reported higher levels of marital conflict than those in the community group, suggesting that children's and not mothers' accounts of inter-parental conflict may be more closely linked with adjustment. This replicates the earlier results of Grych et al. (2000) who found that children's and not mothers reports of conflict discriminated between clusters of children with varying symptom profiles. Moreover, these results are in keeping with those of the previous study which revealed that variation in children's appraisals of threat was associated with variation in internalising symptoms. The lack of difference between rates of internalising across the two groups is therefore consistent with the non significant differences across children's awareness of conflict and appraisals of threat.

In contrast, and somewhat unexpectedly, children in the high hostility community group reported more negative styles of parent-child communication than children who had been exposed to domestic violence. The finding that children's reports of parenting were more positive in the clinical sample, despite significantly higher maternal reports of inter-parental hostility, may be suggestive of some degree

of compensation in the parenting of mothers experiencing violence where they had attempted to buffer children from negative experiences associated with exposure to violence at home (Letourneau, Fedick & Willms, 2007; Levendosky & Graham Bermann, 2000; Levendosky et al., 2003). However, owing to the facet of parenting addressed – communication style, another possibility is that this finding represents some degree of boundary breakdown between mothers' and children where mothers experiencing violent conflict may confide in their children or expect them to behave in a more adult like manner, which to some degree may facilitate higher levels of communication (Jacobvitz et al., 2004; Johnson, 1993; Jurkovic et al., 1991; Weiss, 1979,). Whilst parentification has been associated with negative consequences if responsibilities exceed the capacity of the child (Hetherington, 1989), if children are able to meet these demands it may foster social competence (Hetherington, Bridges & Insabella, 1998). Related to this point, the clinical sample contained a higher proportion of single parent families and there is some evidence to suggest that adolescent-parent conflict is less frequent in stably divorced, mother headed households than in two parent-households owing to parent-child relations that are less hierarchical (Smetana, Yau, Restrepo & Braeges, 1991a). Nevertheless, based on findings contained in earlier chapters, indicating that appraisals of parent-child relationship quality serve as the gateway through which awareness and appraisal of hostile inter-parental conflict affects children's externalising problems, it might have been expected that more positive appraisal of parent-child relations in the clinical group may have been accompanied by lower levels of externalising problems. This was not the case, and thus raises the issue that parenting may not play the same role in communicating the effects of parents' violence to children as it does in the context of non violent conflict. Nevertheless, based on the disparity between group sizes, these

results should be interpreted with caution. Notwithstanding, the clinical and community samples were combined to create a group representing children who had been exposed to extremely destructive expressions of inter-parental conflict. This allowed for the comparison of the process underpinning the adjustment of this group of children with that unfolding in the context of low level conflict that likely represented children's experience of broadly constructively managed parental disagreements.

Process orientated analysis

The results yielded from regression analyses revealed that, as in the previous study, awareness of low level inter-parental conflict did not exert effects on adjustment through children's appraisals relating to the meaning of conflict nor the quality of parent-child relations. These findings, along with those of the previous study (Study 2, Chapter 4) indicate that awareness of more covert expressions of conflict may vary as a function of age, where younger children are less aware of the content of conflict and therefore less affected by expressions of destructive forms of conflict that are not marked by high intensity inter-parental behaviour, for example sarcasm (Davies et al., 1996; Hetherington, 1984; Hetherington, et al., 1989; Younger & Boyko, 1987).

The role of children's appraisals in explaining children's adjustment in the context of low level inter-parental conflict

The results yielded from regression analyses were largely consistent with those generated from analyses presented in Chapter 4, examining process in the context of broadly destructive inter-parental behaviour. As was seen in the previous study which also utilised a pre-adolescent sample (Chapter 4, Study 2), awareness of low level inter-parental conflict did not exert effects on adjustment through children's

appraisals relating to the meaning of parents' conflict, nor the quality of parent-child relations. As previously discussed, several factors likely account for the lack of association between children's awareness or perception of conflict and their appraisal of the inter-parental and parent-child relationships. First, these findings, along with those of the previous study (Study 2, Chapter 4) suggest that awareness of more covert expressions of conflict may vary as a function of age, where younger children are less aware of the content of conflict and therefore less affected by expressions of destructive forms of conflict that are not marked by high intensity inter-parental behaviour, for example sarcasm (Davies et al., 1996; Hetherington, 1984; Hetherington, et al., 1989; Younger & Boyko, 1987). Second, children may not have deemed conflict at this level problematic for parents' and family functioning (Cummings et al., 2004; Easterbrooks et al., 1994; Grych & Fincham, 1990) and third, the possibility remains that awareness of even low levels of inter-parental conflict may have exerted effects on concurrent levels of adjustment through a more developmentally appropriate measure of parent-child relations such as that tapping parent involvement of parent rejection and withdrawal. Again children's appraisals of threat were related to concurrent internalising symptoms and this, taken together with the finding in Study 2 of Chapter 4, that symptom levels were related to later threat appraisals, may give some indication of how, even in the face of seemingly low level conflict, children's past experiences of inter-parental behaviour may continue to exert effects of adjustment through aberrant appraisal processes, even where there has been a marked improvement in the quality of inter-parental relations. Appraisals of parenting were however, again related to concurrent levels of internalising, suggesting that parenting processes may play a part in conveying the effects of covert forms of conflict, of which younger children are unaware, to children's internalising symptoms.

Children's internalising symptoms in the context of hostile and violent inter-parental

relations

In a replication of the longitudinal findings of the previous study, children's awareness of highly hostile conflict and violence was associated directly, with increased internalising symptoms, through appraisals of threat, indicating support for the pathway specified by the cognitive contextual framework (Grych & Fincham, 1990; Grych et al., 2003). This effect is likely underpinned by children's sensitisation to subsequent expressions of conflict, where even low level conflict may cause children great concern, disrupting their ability to manage their emotions (Cummings et al., 1981, 1984; J.S Cummings et al., 1989; El-Sheikh, 1994; 1997; Grych, 1998), which in turn manifests itself as increased symptoms such as anxiety, depression and social withdrawal (Grych et al., 2000; Grych et al., 2003). Evidence presented in Chapter 3 highlights that this sensitisation effect may be underpinned in part by biological dysfunction resulting from children's prolonged exposure to trauma (e.g. Gunnar & Quevedo, 2006). Specifically, traumatising experiences may over stimulate the systems that regulate the stress response, leaving children in a heightened state of fear, hyper vigilant for signs of threat, even in the absence of subsequent traumatising stimuli. The trauma associated with exposure to inter-parental violence, particularly where children have been exposed to extreme forms of violence that may pose a threat to a parent's life, may be more likely to induce biological dysregulation, than exposure to hostile but non violent conflict. Thus, it is feasible that the similar findings generated across non normative and normative samples, examined here and in the previous studies, may be underpinned by different mechanisms. This remains a question for future research, although owing to the fact that process orientated

research of this kind is in its infancy with relation to children exposed to domestic violence, studies of this nature may be some way off.

The lack of effects operating through children's appraisals of the parent-child relationship was again in keeping with the results generated in the previous study. That appraisals of the parent-child relationship do not appear to be implicated in the mechanism by which highly hostile conflict impacts on younger children's adjustment suggests that children's heightened appraisals of threat may prevent the processing of information relating to other family relationships (Fincham, Bradbury & Grych, 1990). In an attempt to remain safe, it is possible that children's psychological resources may be focussed solely on inter-parental conflict, as the source of the threat related information.

Overall, these findings suggest that when children's understanding of conflict, rather than simply their awareness of its occurrence, is taken into consideration, children's appraisal of inter-parental behaviour, rather than of the parent-child relationship communicates the effects of highly hostile conflict and violence to children's internalising symptoms. That children's appraisals of non-normative levels of conflict served as an intervening link between awareness of conflict and adjustment suggests that the cognitive contextual framework (Grych & Fincham, 1990), as a theoretical model may apply equally well to explain children's adjustment in the context of inter-parental violence, as it does to explaining psychological adaptation in the face of non-violent inter-parental conflict. Further, the continuity of these findings with those generated using a sample of children exposed to normative levels of inter-parental conflict suggests that processes identified in analyses using a narrower operationalisation of inter-parental conflict, which captures only destructive behaviours as opposed to the wide spectrum of conflict expressions, may give insight

into developmental mechanisms underpinning negative outcomes in maritally violent family settings. This in turn illustrates the way in which community can be usefully employed to begin to answer questions of clinical significance.

Children's externalising symptoms in the context of hostile and violent inter-parental relations

In contrast to the results observed in the previous chapter, children's appraisals did not serve as an intervening mechanism linking children's awareness of hostile and violent inter-parental conflict to their concurrent externalising problems. Children's awareness of conflict was associated with appraisals of threat, but as in the other models pertaining to externalising problems, and consistent with the findings of other studies (Grych et al., 2003), threat did not impact on adjustment. The lack of direct effects, through children's appraisals of either threat of self blame observed here, is entirely consistent with those aforementioned studies, discussed in the opening to this chapter, which have failed to find effects of inter-parental violence on externalising through children's appraisals of inter-parental behaviour (Grych et al., 2000; Kerig, 1998). The lack of association between perceptions of conflict and self blame is somewhat surprising however, given younger children's developmental predisposition to perceive themselves at fault for conflict (Grych, 1998; Jouriles et al., 2000). This, along with the cross sectional nature of these data, might have been expected to give rise to a particularly robust link between perceptions of conflict and appraisals of blame. However, the lack of association observed here may reflect that even younger children may be more likely to blame parents than themselves in the context of high level conflict (Grych et al., 1998; Weber & O'Brien, 1999).

It also might have been expected that children's awareness of inter-parental conflict would be strongly related to children's appraisals of the quality of parent-

child communication, particularly as this sample was comprised of children exposed to non normative levels of discord between parents, although the results presented in Figure 2 (Panel B) show that this was not the case. There are a number of possible explanations for this counterintuitive finding. First, as in the previous study which also utilised a younger sample of children, awareness of hostile conflict may only impact on appraisals of the parent-child relationship, via children's appraisals of inter-parental conflict. In the absence of an association between conflict and appraisals of blame, perhaps owing to children's propensity to blame parents more readily for very destructive expressions of conflict, then this chain of effects was broken. Second, an effect of conflict on parenting may have been captured had the conceptualisation of parenting reflected increased levels of parents' child directed hostility, which as outlined at several points throughout this thesis, may be a particular concern of children exposed to non normative levels of inter-parental conflict (Appel & Holden, 1998; McGuigan & Pratt, 2001; Tajima, 2002). Additionally, as pointed out above, there may have been some degree of compensation in the parenting of mothers in the clinical sample, based on the fact that children's reports of parenting were more positive as compared to the high conflict community sample, despite significantly higher maternal reports of inter-parental hostility (Letourneau et al., 2007; Levendosky & Graham Bermann, 2000; Levendosky et al., 2003). Nevertheless, that children's appraisals of parent-child communication were significantly associated with children's concurrent externalising problems is in keeping with the previous findings of this thesis and provides some consistent indication that the parent-child relationship, and children's evaluation of its quality, may be a more important factor in determining children's behavioural adjustment, than the inter-parental relationship in and of itself. Nevertheless, the other studies presented within this thesis indicate

that the quality of the inter-parental relationship, as assessed both from parents' and children's perspectives, may be an important determinant of the quality of the parent-child relationship. Whilst the results presented here do not appear to support this conclusion with respect to a sample of children exposed to non normative levels of conflict, it seems unlikely that children's appraisals of these key family relationships would be entirely independent and thus further study is required to investigate more exhaustively, the degree of relatedness of lack thereof of children's appraisals of different aspects of parental behaviour. Further, as outlined in the discussion section of Chapter 4, other types of appraisals may be important in understanding the aetiology of children's aggressive behaviours in violent family contexts. Of importance are thought to be children's beliefs about the acceptability of aggression (Fosco et al., 2007) which may increase the risk that aggressive behaviour observed within the home is re-enacted, based upon children's understanding that coercion and aggression represent legitimate strategies on which to draw on in order to resolve interpersonal conflict (Crick & Dodge, 1996; Dodge et al., 1997; Hubbard et al., 2001; Schwartz, et al., 1998). Cognitions such as these may go some way to explaining the findings of studies which indicate an intergenerational transmission of aggressive behaviour, where children exposed to parents' violent marital interactions are found to behave more aggressively towards intimate partners and their own children (Heyman & Smith-Slep, 2002; Kinsfogel & Grych, 2004). Whilst most children do not go on to become aggressive partners or parents (Heyman & Smith-Slep, 2002), those holding maladaptive social cognitions such as these, may be at an increased risk of aggressive behaviour.

In addition, some theoretical and empirical work has suggested that internalising symptoms such as anxiety serve as conduits for externalising problems

such as aggression (Barnow et al., 2001; Sameroff et al., 2000; Steiner et al., 1997). By way of illustration, a study of children exposed to inter-parental violence, Moretti, Obsuth, Odgers & Reebye (2006) found that the association between exposure to violence and aggression was stronger for children who met the diagnostic criteria for posttraumatic stress disorder. Therefore, it is possible that amongst younger children exposed to highly hostile conflict, appraisals of threat lead to increased internalising, which in turn influences children's externalising behaviours. However, this remains speculative in relation to this study, owing to the fact that internalising and externalising were not estimated in the same model. Structural equation modelling techniques allow for the simultaneous estimation of pathways and so would facilitate the estimation of effects to both internalising and externalising. Future work that served to test the role of internalising symptoms in predicting children's externalising would be a valuable contributing to the evidence base.

Taken together the results of this study serve, for the most part, to replicate the findings of the previous studies using a sample of children exposed to non normative levels of inter-parental conflict, including violence. Children's awareness of hostile conflict appears to impact on their concurrent internalising symptoms directly through the level of threat they perceive the conflict to pose to their own well being and that of their parents and the family as a whole. On the other hand, externalising symptoms are seen to be more directly influenced by children's appraisals of the quality of parent-child relations, as indexed by parent-child communication. The results of this study provide an important step towards understanding the processes through which inter-parental violence may impact on children's psychological adjustment. Further they suggest that there may be commonality in the processes underpinning children's adjustment in the context of hostile inter-parental conflict and inter-parental violence,

particularly with respect to the development of children's internalising symptoms. With this in mind, results derived from studies of normative samples, which use a more specific operationalisation of conflict focussing on children's reports of hostile inter-parental behaviour, may prove a useful first step in casting light on what accounts for the variation observed in children's adaptation in the face of family contexts marked by inter-parental violence. This novel study makes strides towards this end

Limitations

While the present study advances significantly, current understanding of the way in which extremely hostile inter-parental conflict, including violence, influences child adjustment, the conclusions which can be drawn form these findings are limited in several ways. Perhaps the most significant drawback of this study was the small number of children who were sampled from domestic violence related agencies. Whilst the core argument presented throughout this thesis is that it is children's understanding of their experiences, rather than parent reports of their engagement in particular behaviours that is important for delineating pathways to adjustment, credence will only be given to this argument once the pattern of relations demonstrated here are reflected in tests of a large sample of children who have been exposed to their parents' violent behaviour. Whilst efforts were made to select children from the community sample who had reported the most destructive of inter-parental behaviours, they may or may not have been exposed to violent inter-parental behaviours.

Related to this point is the fact that children's reports of inter-parental conflict were garnered, rather than those relating specifically to inter-parental violence. A measure of inter-parental violence would have facilitated a more direct comparison of

children's experiences across the two samples comprising the high conflict group. Further, that children's reports of inter-parental *conflict*, rather than violence were assessed here may have given rise to findings which relate specifically to the mechanisms underpinning children's psychological adaptation in the context of inter-parental conflict occurring in the context of violent homes, rather than violence itself. As noted throughout this thesis, several studies have demonstrated that children's reports of conflict and violence have independent effects on adjustment (Fantuzzo et al., 1991; Jouriles et al., 1989; Jouriles et al., 1996). Thus, the lack of measurement specificity in this study relating to children's experiences of violence may have given rise to an inflated commonality in children's experiences of violent and non violent conflict, with the possibility remaining that quite a different mechanism communicates the effects of violence to children. Future studies should make every effort to measure the full range of children's experiences of inter-parental behaviour in violent homes.

The cross sectional nature of these analyses means that the direction of causality cannot be confirmed with these data all being measured at the same time point. However, the previous studies contained within this thesis indicate that exposure to conflict leads to an increase in children's negative appraisals across a one year lag. Further, a previous test of relations between perceptions of conflict and children's later appraisals of threat and blame indicate that this relationship holds up even after taking into consideration the influence of children's earlier appraisals (Grych et al., 2003). Nevertheless, this does not speak to the temporal ordering of children's appraisals of both inter-parental conflict and parent-child relations, even though here, the former is hypothesised to precede the latter. Indeed, it is possible that hostile parenting may lead children to appraise marital conflict in a more negative

fashion rather than vice versa. As discussed in the opening of this chapter, a higher rate of child maltreatment is noted amongst families marked by high levels of inter-parental hostility and violence (Appel & Holden, 1998; McGuigan & Pratt, 2001; Tajima, 2002). Thus, the possibility arises that at least part of the relationships observed here may be accounted for by children's experience of maltreatment, rather than their exposure to hostile inter-parental behaviour. Davies (2006) conjectures that the severe parenting difficulties in domestically violent homes may be substantially more traumatising that exposure to domestic violence itself, and as a result may supersede the direct risk posed by inter-parental violence to children's functioning. In support of this notion, Maughan and Cicchetti (2002) found that maltreatment, rather than inter-parental violence, was associated with children's dysregulated emotion patterns in response to a live simulated conflict involving children's mothers. Similarly, Hennessy, Rabideau, Cicchetti & Cummings (1994) found that for maltreated children, parent to child aggression was a better predictor of children's responses to inter-adult conflict than children's history of exposure to inter-parental conflict itself. Whilst the findings of this study and those presented in the previous chapter suggest that children's evaluations of the inter-parental relationship may spill over to inform their thoughts relating to the parent-child relationship, the findings of Maughan & Cicchetti (2002) and Hennessy et al. (1994) suggest that this relationship may be inverted in the case where children experience maltreatment. Findings are equivocal however, with other studies finding that inter-parental violence predicts children's adjustment outcomes, even after taking into consideration children's experiences of maltreatment (e.g. Fergusson & Horwood, 1998; Yates et al., 2003). Other studies also attest to the interactive effect that exposure to both types of abuse may have on children's adjustment, with those who experience abuse first hand, as

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well as being exposed to that between parents, faring worse that children exposed to either form of violence alone (Grych, et al., 2000; Hughes et al, 1989). Further, Grych (1998) found that exposure to aggression in both relationships had an interactive effect on children's appraisals of threat and coping efficacy relating to the inter-parental relationship, with these children reporting the highest levels of threat and lowest levels of coping efficacy. With reference to the results observed here, it is possible then that the association between children's awareness of hostile inter-parental conflict and appraisals of threat may have decreased in magnitude or even dropped to non significance when children's reports of maltreatment were controlled for. Further, given that appraisals of parent-child communication was the only construct linked to children's externalising problems, it seems likely that child maltreatment may play an important role in determining children's behavioural outcomes in hostile homes. Future studies should endeavour to control for the quality of parent-child relations at Time 1 to assess the relative contribution of inter-parental and parent child aggression to children's appraisals of family relations, and to moreover determine whether inter-parental violence continues to exert effects on children's adjustment through appraisals after the effects of direct maltreatment have been controlled for.

Finally, as a greater proportion of children in the clinical sample hailed from single parent-households and a prerequisite of involvement with some of the agencies was that violence had ceased, then it may be the case that children in the community group were exposed to more proximal conflict which may have had implications for children's responses across appraisal measures. This possibility is illustrated by the fact that children in the clinical sample rated mother child relations as more positive than did children in the community sample. Further, some parents in the clinical

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sample had formed new relationships and thus, whilst children were asked to locate their answers relative to the perpetrator of abuse, it may have been that younger children's answers were more reflective of the subsequent relationship. Any future study should take account of these factors by controlling for time since exposure and making greater efforts to locate children's answers relative to the violent parent or parents.

Notwithstanding these limitations, this study represents a first step towards shedding much needed light on the processes through which hostile inter-parental conflict from the child's perspective impacts on child adjustment. Moreover, these results have significant implications for the way that intervention programmes should be targeted. The findings relating to internalising suggest that intervention programmes targeting parenting may be all together ineffective in reducing children's symptoms of anxiety and depression, which have arisen in part owing to children's exposure to inter-parental conflict. Instead targeting children's fears that relate directly to inter-parental behaviour, as well as the way that children detect and process threat related information may be more beneficial. Additional research however, is needed to explicate the mechanisms through which violent conflict may impact on children's externalising problems, although the results presented here suggest that intervention programmes that focus on parenting, and the way that children perceive the relationship with their parents, may have some success in reducing children's externalising behaviours in violent family contexts.

Chapter 6

The central aim of this thesis was to examine the extent to which mechanisms identified as communicating the effects of inter-parental conflict to children can be applied to more extreme family contexts, in order to give insight into how hostile and violent couple conflict may impact on children's psychological health. In particular, this thesis was concerned with the role that children's appraisals of inter-parental conflict and the quality of the parent-child relationship may play in explaining the link between children's exposure to inter-parental conflict and violence, and their adjustment outcomes. This represents an integration of perspectives that emphasise children's social cognition as a mediator of adjustment, and those which locate the parent-child relationship as the primary mechanism through which children are affected by inter-parental conflict. Research exploring the processes that underpin the link between hostile forms of inter-parental conflict and child adjustment is particularly timely in light of recent legislative changes (Adoption and Children Act, 2002), such that in some cases, exposure to parents' hostile and violent conflict may now be considered as a child protection issue. This chapter presents the main conclusions drawn from each study, and a synthesis of the key empirical findings of the thesis. This is followed by a discussion of these findings with respect to their translation to inform policy and practice, with specific reference to children exposed to hostile inter-parental conflict. Finally, there is discussion of some overall limitations and directions for future research.

Overview of primary findings

The opening chapter of this thesis served to underscore the lack of enquiry with respect to the processes that underpin variation in children's adjustment in the context of violent inter-parental conflict, identifying the marital conflict literature as a starting

point from which to begin to remedy this issue. The role of disrupted parenting and children's active processing of inter-parental conflict were highlighted as prominent perspectives that may have utility in explaining children's adaptation in maritally violent family contexts. The first study in this thesis, Chapter 2, turned to consider the former of these perspectives, examining disruption to the parent-child relationship as a mechanism through which the effects of inter-parental conflict are conveyed to children. Further, this study sought to locate the broader social and family context in which marital conflict may occur. The findings of this study indicate that family stress increases inter-parental conflict, which affects children indirectly through disruption to parent-child relations. These findings underscore that factors outside of children's immediate developmental context may impinge on their adjustment through the disruption caused to key family relationships. However, whilst delineating one process through which children may be affected by violent and non violent marital conflict, the indirect effects model is limited by the fact that it does not acknowledge the direct impact that conflict may have on children by virtue of the meaning that children attach to its occurrence.

With this in mind, evidence was reviewed in Chapter 3 pointing to children's social cognition as a mediator of the link between children's family experience in general, and inter-parental conflict in particular, and children's adjustment. Research signalling the importance of children's appraisals of threat and blame relating to the inter-parental relationship as key determinants of children's adjustment was reviewed, with consideration given to the equivalent role that these appraisals may play in accounting for the link between serious inter-parental conflict and children's adjustment.

Together these first three chapters highlight empirically, and theoretically, two of the principal mechanisms through which parents' conflict is found to affect children, and begins to give account of how these perspectives may be useful in understanding the affects of violent conflict on children. The following three studies sought to unite these perspectives in order to examine how children's cognitive appraisals of multiple family relationships may explain the link between children's awareness of inter-parental conflict and violence, and children's adjustment. Attention has turned to this endeavour only very recently, and to date there is little articulation of how children's understanding of events occurring between parents may inform their appraisal of the relationship with their parents, and how together, children's understanding of multiple family relationships may mediate links between inter-parental conflict and child adjustment.

Chapter 4 examined the interrelations between children's appraisals of threat and blame, and parent-child relations in the context of inter-parental conflict, and the joint role that these appraisals play in mediating the effect of conflict on children's adjustment. As a step towards illuminating the mechanisms underpinning the link between children's exposure to violent inter-parental conflict and child adjustment, the first study in this chapter sought to disentangle the processes explaining adolescent children's adjustment in the context of low and high conflict. A complex pattern of results was revealed, indicating that the mechanism underpinning the inter-parental conflict - child adjustment link differed according both to the level of conflict to which children were exposed and the index of adjustment being considered. Low level conflict was found to affect children's internalising symptoms indirectly, through the joint effect of children's appraisals of threat, and appraisals of negative parent-child relationship quality, whereas children's externalising symptoms were

affected directly through children's appraisals of blame. Exposure to more hostile conflict was found to affect both internalising and externalising indirectly. Intuitively, children's awareness of more severe conflict impacted directly on children's appraisal of the parent-child relationship, rather than effects being mediated by children's appraisals of inter-parental conflict, suggesting that the simple occurrence of hostile inter-parental conflict is sufficient to activate concerns relating to the quality of parent-child relations. Consistent with a sensitisation hypothesis, children's internalising symptoms were also affected directly by children's awareness of hostile inter-parental conflict, through children's appraisals of threat. This is the first study to assess simultaneously the role of children's appraisals of both the inter-parental and parent-child relationship in linking exposure to low and high level conflict to children's adjustment. That direct and indirect effects were observed in the context of both low and high conflict, underscores the importance of considering children's evaluations of both relationships, in explaining the way in which conflict may impact on children's adjustment.

The second study contained within Chapter 4 was undertaken to determine the extent to which these findings might be replicated amongst a younger group of children. In general, there is less consideration of the role of children's cognitions relating to the inter-parental relationship amongst pre-adolescent children, a significant lacuna in the evidence base owing to the noted cognitive, social and biological changes that mark the transition to adolescence, which may serve to differentiate the social cognitive abilities of older and younger children, and which in turn may mean that processes identified in one age group may not generalise to the other. Here it was found that in the context of low level conflict, children's awareness of conflict was not associated with children's appraisals of threat, self blame relating

to inter-parental conflict or to appraisals of parent-child communication, and so children's appraisals did not offer a mechanism to link exposure to conflict to children's adjustment. Children's appraisals of parenting were however, associated with internalising symptoms, suggesting that disrupted parent-child relations, even in low conflict homes, may influence adjustment. The results yielded with respect to high conflict were remarkably consistent with those described with relation to the older sample of children considered in Study 1. Hostile inter-parental conflict was linked with children's internalising symptoms directly through appraisals of threat, whereas children's externalising symptoms were affected indirectly through appraisals of self blame and parenting; indicating that whilst not influencing adjustment directly, appraisals of the inter-parental relationship play an important role in shaping children's appraisals of the parent child relationship, which then serve as a direct influence on children's externalising problems.

These findings, taken together, highlight the need to consider children's appraisals of multiple family relationships when considering children's psychological adaptation in the context of conflicted and hostile inter-parental relations. The variation in process across low and high conflict groups across both studies, as well as differences between subgroup and full sample analyses, highlights the necessity of a narrower operationalisation of conflict in order that results derived from community studies may be able to give some insight into the processes through which extreme forms of conflict affect children. However, whilst informative with respect to elucidating mechanisms through which inter-parental violence may affect children, both sets of findings were derived with the use of community data, meaning that conclusions regarding their generalisabilty to non normative contexts should be drawn tentatively.

Chapter 5 addressed this issue, employing a sample of children drawn from both community and clinical settings who had been exposed to hostile and violent inter-parental conflict. The processes underpinning adjustment in this group were compared to those observed in a group of children exposed to very low levels of conflict. Congruent with Study 2 of Chapter 4, children's appraisals of family relationships were not found to link exposure to low level conflict to either internalising or externalising, although again appraisals of parenting were linked with internalising. On the other hand, hostile and violent inter-parental conflict influenced children's internalising directly through appraisals of threat, suggesting that children's appraisals of threat may play a functionally equivalent role across hostile and violent forms of inter-parental conflict. Children's appraisals of parent-child relations were related to externalising problems, conferring with the other studies to suggest that in the context of hostile and violent inter-parental relations, children's appraisals of parenting serve as an important source of influence on children's behaviour problems, although in this instance children's awareness and appraisal of inter-parental conflict was not linked to children's view of the parent-child relationship.

Collectively, the results yielded from these three interlocking studies indicate that children may be affected by inter-parental conflict by virtue of their appraisals of its meaning, and their understanding of the consequences that it might have for the quality of the relationship they have with their parents. The findings relating to low conflict suggest that adolescent children may be more sensitive to the spectrum of inter-parental behaviour than younger children. Older children may simply be more aware of more covert expressions of conflict, or it may be that the increased demands and pressures experienced by adolescents at home and at school increases their vulnerability to inter-parental discord. Younger children may still be affected by

lower level inter-parental conflict however, through qualitative shifts in the quality of parent-child relations, even if they are ostensibly unaware of inter-parental conflict.

Children's appraisals of threat appear to be a particularly robust mechanism through which hostile and violent forms of inter-parental conflict impact on children's internalising symptoms. Children exposed to high levels of conflict may become overwhelmed by the level of threat it poses, which in turn undermines their capacity to regulate their emotions, increasing the risk of internalising symptoms such as anxiety, depression and social withdrawal. Children's appraisals of the parent-child relationship on the other hand seem to be more consistently related to children's externalising symptoms in the context of hostile and violent conflict. Children's appraisal of poor quality relations with their parents may make it less likely that children furnish their parents with the type of knowledge (Crouter & Head, 2002) that makes it possible to keep track of behaviour outside of the home. Parental knowledge has been linked with both delinquent behaviours in older children, and behavioural competence in younger children (Crouter et al., 1990; Grundy et al., 2007; Stattin & Kerr, 2000). Crucially, children's awareness and appraisal of inter-parental behaviour appear to serve as an important orienting influence of children's appraisals of the quality of parent-child relations.

Variation in results yielded in analyses undertaken with the full sample, relative to those derived from subgroup comparisons suggests that analyses using a broad conceptualisation of conflict (i.e. ranging from constructive through to very destructive), as frequently found in the marital conflict literature, may not adequately capture the unfolding sequelae in either low or high conflict homes, underscoring the need for a more fine grained analysis of the processes through which the spectrum of inter-parental behaviours affect children. On the otherhand, the consistency of results

derived across high conflict groups derived from normative and non normative samples suggests that community data may be more usefully employed to offer insight into the processes underpinning children's adjustment in the context of severe forms of conflict.

Together, the results of the four empirical studies contained within this thesis indicate that inter-parental conflict and violence may have both direct and indirect effects on children. The results support the utility of considering children's perspectives on multiple family relationships in attempting to delineate the processes through which conflict affects children's wellbeing. Further, these results indicate that even where children's appraisals of conflict and violence do not exert effects on adjustment directly, children's awareness of the occurrence of conflict, and the meaning that children derive from parents' conflictual exchanges may serve as an important orienting influence on the way in which children perceive relations with their parents, which in turn impacts on adjustment.

Contextualising findings: Implications for practice and policy

The purpose of research such as this, undertaken to better understand the processes that underpin the link between children's exposure to adversity and negative adjustment outcomes, is to lay the theoretical foundations on which to build effective interventions that aim to improve children's wellbeing. To this end, the findings contained within this thesis have some potentially significant implications for both policy and practice.

As was highlighted at the outset of this chapter and indeed this thesis, the relevance of understanding the processes through which inter-parental conflict and violence affects children has taken on greater social and clinical significance of late, owing to a legislative change, which has drawn attention to the psychological impacts

that may be experienced by children in the context of parents' violent and hostile conflict. This has obvious implications for households which are marked by parents' angry and hostile exchanges, which in the past may only have been considered as posing a threat to children's well being, owing to an increased potential of physical child abuse and neglect (Appel & Holden, 1998). The extension of the definition of significant harm to include the risk posed by exposure to parents' hostile and violent conflict has raised the profile of children as potential victims of domestic violence, even in the absence of direct maltreatment. It has also drawn attention to those children who, although not exposed to physical violence, live in households where parents are verbally and psychologically abusive to one another. Nevertheless, whilst this amendment to state legislature has done much to increase the awareness at all levels of the problems that might be faced by children growing up in conflicted and violent family settings (Rivett & Kelly, 2006), evidence suggests that most children exposed to their parents' marital conflict, and a significant proportion of those exposed to violent conflict, continue to function well, in spite of the adversity with which they are faced (Grych et al., 2000; Holden, 1998). Without significant understanding of this or the factors that mean that some children are at greater risk than others, the danger is that this change in policy signals to agencies that each and every child exposed to domestic violence requires a child protection response (Rivett & Kelly, 2006). Indeed, this has been observed elsewhere following definition changes implemented to increase awareness of the impact of domestic violence on children.

Edelson and colleagues describe how referrals to Minnesota's child protection system increased exponentially in the months following an expansion of the definition of neglect in 1999, to include exposure to domestic violence (Edelson, Gassman-Pines

& Hill, 2006). With this language change, the state mandated that a range of professionals report every child suspected to have witnessed adult domestic violence. This created a significant and unmanageable burden for the child protection system. Practitioners were ill equipped to identify those factors that increased the risk for children exposed to interadult violence in the home, and the concern was raised that children severely in need of services were not receiving them, owing to the requirement to screen, assess, and respond to this larger group of children, many of whom it was felt did not require a child protection response. After a year the legislature was essentially repealed, and although the intention was to replace it with a new, more comprehensive definition, this has not yet been implemented. In the light of evidence to suggest that the number of children referred to local authorities is becoming in some instances, difficult to manage in parts of the UK (Social Services Inspectorate of Wales, 2004, 3.12.6), it is of paramount importance that lessons are taken from Minnesota's experience.

With the knowledge that the number of children who are exposed to domestic violence is large, that not all children are affected in the same way, and to the same extent, and the recognition that resources to intervene are limited, there is a clear need for a means of assessing risk to children in order to be able to target resources where they are most needed. To date, Rivett and Kelley (2006) suggest that there are a lack of assessment tools with which to identify need, and allocate resources, and a lack of measures that identify which children need which sorts of help, based on the notion that only the most severe cases should invoke a child protection response (Edelson, 2004). Undoubtedly, the first priority should be to assess physical risk to children and to respond accordingly. However, after children are made safe or when safety concerns are not an issue, the next priority should be the consideration of the

psychological risks that exposure to violent inter-parental conflict poses to children.

Calder (2004) draws attention to the need to assess the psychological impact of hostile and violent conflict on children, and advises practitioners of the types of questions to address with children such as, 'what kind of things make you angry,' and 'do you worry about your mum and dad'. He also suggests that practitioners should determine the extent to which children blame themselves for the violence and what they do in response to its occurrence, although, it is not made clear how this information should be solicited. Crucial however, is that these child focussed questions are not included as part of Calder's (2004) suggested risk assessment framework, which almost completely focuses on parents' or practitioners' impressions of violence, and its effects on children and the quality of parenting. Throughout this thesis, the case is made that children's perspectives on family relationships represent an important determinant of children's adjustment in the context of hostile and violent conflict. Whilst Calder's (2004) checklist represents some recognition of this theme, without an understanding of what these questions represent or what it means when children endorse that they feel threatened, unable to cope, and to blame for parents' violence, children's responses simply represent contextual information that is seen as an adjunct to the more meaningful information garnered from practitioners and parents. Further, without a validated scoring system, which sets out thresholds beyond which children are deemed to be in need of intervention, even the most experienced practitioner may have difficulty in combining meaningfully, children's answers across a number of different questions to determine the course of action to be taken, if any. With respect to the prediction of violent reoffending in adults, actuarial methods of risk assessment, which rely on empirically developed sets of questions to estimate the likelihood of violence in the future, are seen as a more reliable and consistent

approach to risk assessment and prediction, than reliance on clinical judgement alone (Grove & Meehl, 1996; Mills, 2005). Evidence suggests that even expert clinical opinion may be influenced by particular pieces of information which may be given undue weight in the risk assessment process (Northcraft & Neale, 1987); thus actuarial risk assessment may overcome this issue.

The results presented in this thesis suggest that children may be at increased risk of negative emotional and behavioural outcomes when they feel threatened by the occurrence of conflict, when they feel to blame for its cause, and when they perceive negative styles of communication with parents. Assessment of the extent to which children exposed to hostile and violent inter-parental conflict endorse these social cognitions may represent a significant step forward in identifying children who are at an increased risk of maladjustment, and who are in need of further intervention. Translation of the findings of this thesis to inform the development of a risk assessment tool represents a primary illustration of the way in which better understanding of the mechanisms through which exposure to violence may affect children can be drawn upon directly to inform practice and policy.

Following on from being able to identify children who are at increased risk of emotional and behavioural difficulties, understanding of the processes underpinning the link between exposure to inter-parental conflict and violence and child adjustment also illuminates appropriate sites to be targeted by prevention and intervention efforts. As evidenced in the latter three studies, children exposed to high levels of inter-parental conflict and aggression experience higher rates of clinical level problems than children exposed to lower levels of conflict, as well as elevated symptom levels. There is growing recognition that a focus on children's symptom levels, as well as on clinical diagnoses may facilitate the identification of children demonstrating

outcomes that are less than optimal, but which have not yet reached the level of clinical disorder (Conte & Savage, 2003; Fincham & Grych, 2001). Research such as this may be drawn upon to inform the development of preventative programmes which aim to steer children away from risky developmental trajectories, before problems ever reach a level that requires clinical intervention.

Currently, whilst there are a number of widely utilised models of working with children exposed to domestic violence, (e.g. Graham-Bermann, 1992; Jaffe, Wolfe & Wilson, 1986; Peled & Davis, 1995), brought to the fore in recent years is that these programmes are often poorly evaluated, and those which are, tend to show varying degrees of efficacy (Graham-Bermann, 2001). Underpinning this as a root cause is the lack of a coherent and extensive corpus of literature detailing the mechanisms through which effects are communicated to children. As Cicchetti & Toth (2006) highlight, before appropriate treatments can be developed and evaluated, there must be a clear understanding of the mechanisms and processes that initiate and maintain the developmental pathways to disease. The paucity of process oriented work in this area of enquiry means that intervention programmes, aimed at helping this vulnerable group of children, are often constructed without a clear focus as to what they are targeting, and are evaluated without understanding of what they should have achieved (Graham-Berman, 2003).

As an exception to the this general state of affairs, some of the better developed and well evaluated programmes are based on the model of coercive family process (Patterson, 1982), with the specific aim of reducing children's conduct problems by targeting parents' ineffective management of child behaviour. Several studies have found that in comparison to controls, children whose mothers took part in an intervention programme exhibited fewer conduct problems and internalising

symptoms, and mothers were less likely to use aggressive child management techniques, such as slapping, when a child misbehaved. Further, mothers reported decreased parenting stress. Importantly, positive effects were seen to be maintained for some time after the end of the programme (Ducharme, Atkinson & Poulton, 2000; McDonald, Jouriles & Skopp, 2006). Whilst facilitating positive outcomes for children and parents, programmes that focus solely on parenting take little account of the context in which parenting takes place. For the purpose of these particular intervention initiatives, mothers were separated from a violent partner, although is not to say that violence or some degree of conflict did not continue whilst mothers took part in the intervention.

Continuing marital conflict may undermine parents' ability to parent in an effective way, and as a result, it may be difficult to put into practice what is learnt in parenting programmes. Studies show that whilst parenting programmes may be somewhat effective, an additional focus on couple issues facilitates added improvement in parenting (Webster-Stratton, 1994). Further, in comparing programmes with a sole focus on couple issues or parenting, those with a couple focus are found to facilitate improvements in both the quality of the inter-parental and the parent-child relationship, ameliorating two sources of risk in children's lives, whilst parenting programmes only seem to facilitate change in parenting skills (Cowan, Cowan, Ablow, Johnson & Measelle, 2003). Thus, interventions that do not address couple issues, particularly the level of conflict that marks the inter-parental relationship, may neglect an important source of influence on parents and parenting. Whilst it may not be appropriate to deliver interventions of this type in instances where domestic violence has been severe and one parent is fearful of the other, this type of intervention may be appropriate for couples who engage in lower levels of

bidirectional violence, which characterises the majority of domestically violent families (Jouriles et al., 2001).

Further, the results of this thesis demonstrate that ongoing inter-parental conflict may continue to exert effects on children over and above any improvements to the parent-child relationship. What is more, children's evaluations of the quality of parent-child relations may be shaped by the mere occurrence of inter-parental conflict. The extent to which children perceive hostile inter-parental conflict to be threatening, seems to be particularly significant in explaining children's internalising symptoms. As the first priority in ameliorating children's sense of threat, Cunningham & Baker (2004) emphasise that the initial step in any intervention should be to stop the violence, or to reduce children's exposure to its occurrence. However, children who have been chronically exposed to hostile inter-parental conflict and violence may continue to appraise a high level of threat in their environments, even after conflict has decreased or stopped altogether; responding negatively to even low level inter-parental or parent-child discord (Harger & El-Sheikh, 2003; Weber & O'Brien, 1999). Thus, even where there has been an improvement in the quality of inter-parental relations, or a cessation in violence, children's continuing appraisals of threat and fear, relating to inter-parental conflict may maintain children's distress. One strategy that has been proposed may be to help children to be more considered and deliberate in the way that they appraise a situation, rather than responding automatically, based on their previous experiences. Children could be taught to rely on situational cues to more accurately distinguish between benign and violent or hostile conflicts, and to recognise that not all conflict may follow the same course (Grych & Cardoza-Fernades, 2001; Rivett et al., 2006). This technique has been demonstrated to have some success with aggressive children

who have a propensity to interpret situations as hostile. Children taught to more accurately distinguish the intentions of others have been found to demonstrate a decrease in hostile attribution scores and an associated decrease in aggressive behaviour, in comparison to a control group (Hudley & Graham; 1993; Sukhodolsky, Gloub, Stone & Orban, 2005), although this strategy may only prove effective in reducing children's appraisals of threat if levels of conflict have decreased, and there is some differentiation in the way that disagreements are expressed.

Unfortunately, many children may continue to live in households marked by high levels of hostility and violence, and it may be ineffective, and largely counterproductive to work towards reducing children's sensitivity to threat cues when the anticipation of violence is real and immediate (Harris, Lieberman & Marans, 2007). In these instances, hypervigilance for threat cues may be an adaptive response to ongoing violence (Davies et al., 2002). When this is the case, work to enhance children's coping efficacy may have some impact on how threatened children feel. Constructing a safety plan with children living with severe violence may be one means of increasing coping efficacy. Hester et al. (2007) suggest that key elements to any safety plan should include identifying a safe place to go to when violence occurs, identification of a person that the child can contact in the event of an emergency, teaching the child to contact the emergency services and ensuring that the child understands that it is neither safe nor his or her responsibility to intervene in violence occurring between parents. Knowledge of what to do in an emergency may reduce children's anxiety that something bad will happen to one or both parents, and may lessen children's sense of blame arising from being unable to protect one parent from the other (Fosco et al., 2007). Importantly, a safety plan that promotes non involving coping strategies may decrease children's desire to directly intervene in violent

conflict, lessening the risk of physical injury. Safety planning is a common theme amongst many of the existing child focussed intervention programmes (Graham-Bermann, 1992; Jaffe et al., 1990; MacMillan & Harpur, 2003), and children have been shown to demonstrate some improvement with respect to this area of knowledge, following intervention (Graham-Bermann, 2000), although as of yet there is no evidence to show that increased safety knowledge impacts directly on children's sense of coping efficacy, or their appraisals of threat specifically. Children may also be taught to draw on emotion focussed strategies as a way of coping, which in the face of uncontrollable stressors may be more adaptive than problem focused coping strategies (Forsythe & Compas, 1987). For example, MacMillan and Harpur (2003) teach children relaxation techniques that can be employed during stressful times, such as when children are aware that violence is occurring. This may also decrease children's propensity to involve themselves in parents' disputes.

Chapters 4 and 5 illustrate that different mechanisms may underpin the development of internalising and externalising symptoms in the context of high conflict homes, and these results suggest that targeting children's appraisals of threat may be largely ineffective in reducing children's externalising behaviours. Work to reduce children's appraisals of self blame may have some success in reducing younger children' externalising problems, by decreasing the negativity which they perceive marks their relationship with their parents. Further, targeting these appraisals may be effective in reducing adolescent externalising problems in the face of less severe conflict. Several studies have shown that explicitly exonerating children from blame reduces the extent to which both older (10-12 years) and younger (4-5 years) children make internal attributions of cause (Grych & Fincham, 1993; Yabarra, Lange, Passman & Fleming, 2006). Yabarra et al. (2006) found that children who had

heard statements indicating they were not to blame for negatively expressed conflict made similar attributions of cause as children who had been exposed to constructively managed conflict. Further, children who made fewer internal attributions showed less distress, as indexed by behavioural and physiological responses (Yabarra et al., 2006). Thus, in working with parents it might be emphasised that directly informing children that conflict is not their fault may be a useful strategy in reducing children's appraisals of blame, and relatedly, their propensity to demonstrate externalising symptoms. Indeed, child focussed interventions often undertake to locate blame with a violent parent and reduce children's feelings of shame. Programmes that include this component have been shown to have some success in reducing children's appraisals of blame, and relatedly their externalising problems (Graham-Bermann, 1998), although as these programmes tend to contain multiple components it is difficult to attribute these reductions in externalising symptoms to work centering on appraisals of blame.

The findings of this thesis highlight that it may be useful to explore with children the way that awareness of hostile and violent conflict impacts on their expectations relating to parent-child interactions. Expressing fears about the possibility that conflict may spill over to the parent-child relationship may be useful, and provide the opportunity for discussion about how to respond should this be the case. Given that younger children may hold less distinguished representations of the inter-parental and parent-child relationship (Jenkins & Buccioni, 2000), there may also be some benefit in emphasis on the inter-parental relationship and the parent-child relationship as distinct, stressing that conflict may stem from parents' problems rather than those stemming from the child's actions, or from events occurring between parents and children. Parents may be unaware of how their interactions as a couple

may set the tone for the way that children view other family relationships. Therefore, emphasising to parents that children's evaluations of the parent-child relationship may be affected, just by their awareness of hostile conflict may be of some benefit.

Finally, direct focus on children's appraisals of the parent-child relationship may also be effective in reducing children's externalising symptoms, in particular those of children exposed to violent conflict. Programmes that bring about positive improvements in the way that parents parent, by decreasing conflict and increasing parenting skills, may have some impact on children's appraisals of relationship quality. With particular respect to the quality of parent-child communication, recent studies demonstrate that communication that is at odds with children's experiences of conflict or with the family environment in general may be particularly detrimental to children's representations of the family, and may increase the risk of maladaptation (Gomulak-Cavicchio, Davies & Cummings; 2006; Winter et al., 2006). Examples of this may be where parents emphasise the positive nature of the inter-parental relationship following the occurrence of violent conflict, or where they deny that conflict has occurred altogether. With this in mind, parents may be helped to understand that not all communication is positive and that their attempts to buffer children from the negative consequences of their experiences, by framing violent exchanges in a constructive way or denying the significance of a particular exchange, may magnify the risk posed by violence to children's psychological well being.

The findings of this thesis suggest that interventions that specifically target children's appraisals of the inter-parental and parent-child relationships, may be efficacious in ameliorating children's internalising symptoms and externalising symptoms. The preceding discussion highlights some of the practical ways in which children's maladaptive social cognitions may be addressed, and whilst many of these

approaches are already evident in existing intervention programmes they often do not provide the core focus of child centred intervention. Further, programmes that directly target parenting, often lack information for parents on how inter-parental conflict and violence may impact on children, and how problems in the inter-parental relationship may in turn engender, children's appraisals of more negative parent-child relations. Intervention that aims to improve the way in which parents manage their conflicts and the quality of parent-child interactions, in combination with intervention to directly target children's appraisal processes, may be the most effective way of improving children's well being. This is supported by a study by Graham Bermann (2000) where it was found that intervention that targeted both parenting and children's maladaptive appraisals facilitated the greatest improvement in children's adjustment following children's exposure to domestic violence, in comparison to a child only intervention. This was found to be particularly so with respect to externalising symptoms, which as the results of this thesis show, seem to be most proximally influenced by children's appraisals of the quality of relations with their parents. The results of Chapter 2 also demonstrate that interventions aimed at alleviating some of the risks occurring outside the sphere of the family may also be beneficial to improving the quality of family relationships and parent well being, which may in turn have associated benefits for children. Thus, a three pronged approach to intervention that serves to target children's appraisals of family relationships, to reduce inter-parental conflict and enhance parenting, and to decrease sources of family pressure may represent the optimum way of ameliorating children's negative outcomes, following exposure to hostile and violent conflict.

Limitations of studies conducted

Some limitations can be noted in relation to the studies described in this thesis. First, whilst these results are undoubtedly interesting and potentially practically significant, conclusions must be drawn tentatively, owing to the lack of statistical differences between equivalent pathways in low and high conflict models. It is notable that significant differences between regression coefficients were not found in the latter two studies where subgroup sizes were much smaller than in Chapter 4. Therefore, differences in power across these studies owing to smaller sample sizes may have limited the ability to find effects. Further, the analyses contained within this thesis were undertaken using multiple regression procedures, although it is noted that structural equation modelling procedures may offer several advantages over this approach to data analysis.

With respect to the way that theoretical variables were measured for the purposes of this study, the conflict properties scale of the CPIC (Grych et al., 1992) provides limited measurement of the hostile and violent tactics that children may observe. For ethical reasons it was required that three questions tapping children's appraisals of extreme expressions of inter-parental conflict were not included for the purposes of the community study. These included questions relating to the use of person and object directed aggression, and children's fears that a parent will get hurt when conflict takes place. Whilst these questions were asked of the clinical group, the lack of continuity between samples meant that they could not be utilised in the analyses contained within the final study. As noted at several points through the preceding chapters, children's appraisals of violent and non violent tactics account for unique variance in children's negative adjustment outcomes and it seems likely that these aspects of parent behaviour may have contributed to children's appraisals of

inter-parental conflict, particularly appraisals of threat. Without surveying the range of aggressive and coercive tactics that may be enacted by parents, and without eliciting the full extent of children's appraisals relating to violent conflict, models that attempt to test the mediational role of children's cognitive processing in violent family contexts may be limited. This is an example of where researchers are presented with the paradox that in seeking to understand the pathways that lead to children's long-term distress in aversive family contexts, they are prevented from asking difficult questions of children, in order to avoid causing short term upset. This research represents a significant step forwards for researchers attempting to understand the effects of inter-parental violence on children, however, as noted in the opening chapter of this thesis the marital conflict research literature should be used as roadmap rather than a blueprint. The aim is not merely to replicate work undertaken with community samples, but to establish that mediating factors such as children's appraisals are important and then to move beyond this to understand the particular aspects of children's experiences that are important for explaining adjustment in different family contexts. This requires broader measurement of the appraisals engendered in children living in maritally violent homes, both in community and clinical settings.

A third limitation to be borne in mind, with relation to each of the studies contained within Chapters 4 and 5, is that whilst children's appraisals of threat and blame are hypothesised to precede children's appraisals of parenting, the concurrent assessment of children's appraisals of the inter-parental and parent-child relationships limits conclusions that can be drawn regarding the direction of effects. A design that incorporated measures of children's evaluation of the parent-child relationship at an earlier time point would have improved confidence in conclusions regarding the

direction of effects between appraisals of inter-parental conflict and parenting. Given the increased risk of the maltreatment of children, even in families characterised by less serious violence (Tajima, 2002) and the possibility that the relations between the theoretical constructs may have been in part accounted for by parent-child directed hostility , controlling for children's appraisals of parent-child relations at Time 1 would have facilitated exploration of whether children's evaluations of parent-child negativity accounts for unique variance in the way the inter-parental relationship is appraised, as well as vice versa, as was explored throughout this thesis. In addition, controlling for both appraisals of parent-child relationship quality and adjustment at Time 1 would have provided an index of change in each dependent variable (parent-child relationship quality and adjustment problems at Time 2) as a function of the independent variables (e.g. Grych et al., 2003; Kessler & Greenberg, 1981). The ability to address these questions rests upon the continued use of prospective longitudinal research designs, such as those described in the empirical chapters of this thesis.

Apparent in these studies is the limited consideration of either parent or child gender. Cowan, Cowan & Kerig (1993) argue that parents can not be described without specifying whether reference is being made to mothers or fathers, and similarly children can not be considered without distinguishing between boys and girls. The meaning of violent inter-parental conflict to children may vary according to whether behaviour is enacted by the father or the mother. Recent work suggests that children appear to be most distressed by, and most pessimistic about, physical aggression enacted by a male (Goeke-Morey et al., 2003; Harger & El-Sheikh, 2003). In addition, findings suggest that in conflictual families, children perceive fathers' anger as more salient than mothers' (Howes & Markman, 1989; Webster & Herzog,

1995); with the suggestion that children may focus more on the behaviour of fathers as they are more likely to control the outcome of the interaction between parents (Crockenberg & Forgays, 1996), and more likely to use severe conflict tactics (O'Keefe, 1994; 1995). Typically it is found that where men do engage in hostile behaviour towards a spouse, they use more severe forms of aggression (Archer, 2002; Langhinrichsen-Rohling, Neidig & Thorn, 1995), and in the instances where violence is chronic and severe, it is more likely to be perpetrated largely by husbands against their wives (Archer, 2000; 2002; Johnson & Ferraro, 2000; Straus, 1990). These findings should not be taken to indicate however, that mothers' behaviour before, during and after a conflicted or violent exchange does not have a part to play in determining children's psychological adaptation. As outlined in Chapter 1, findings show that women may perpetrate less lethal and less injurious, but nevertheless quite significant forms of violence, more frequently than males (Archer, 2002). Further, other forms of behaviour enacted by mothers, such as threats to leave the home and physical aggression against an object, are shown to be distressing to children (Goeke-Morey et al., 2003), and may account for unique variance in children's outcomes. Moreover, it has been shown that even though children may perceive fathers as more aggressive, both fathers' aggression directed towards mothers, and mothers' aggression towards fathers, accounts for unique variance in children's appraisals of threat and emotional insecurity (El-Sheikh, 2008; Grych 1998). Mullender et al. (2002) suggests that where violence between parents is not brutal, children may perceive it as mutual, with both parents having a part to play. This type of mutual combat between parents may constitute the most common type of violence to which children are exposed (Jouriles et al., 2001), particularly in samples selected from community settings. Further, even in those families characterised by chronic levels of

severe violence, it is possible that children may be affected by their mothers' behaviour that occurs in the context of a violent exchange. Therefore, whilst it may be the case that severe violence may be more commonly perpetrated against females (Johnson & Ferraro, 2000) and men more likely to inflict harm on women (Archer, 2000; 2002; Straus, 1990), children's appraisals of *both* parents' behaviour during conflicted and violent exchanges – both violent and non-violent- may be important in understanding their immediate responses and longer term adjustment. Therefore, future research should consider the tactics enacted by fathers and mothers and more importantly children's appraisals of each parent's behaviour.

There may also be some differences in the way that boys and girls perceive inter-parental conflict. Gender differences have emerged both with relation to the extent that particular appraisals are endorsed by children and in the processes through which conflict exerts effects on adjustment. Whilst boys and girls may experience similar levels of exposure to inter-parental conflict, they may attribute different meaning to these events. Some support has been found for the view that boys tend to respond to inter-parental conflict with feelings of threat, while girls tend to experience increased self-blame (Cummings et al., 1994). Grych et al. (2003) found that in addition to links between children's appraisals of threat and internalising symptoms, boys' appraisals of threat were linked with externalising symptoms. Further, girls' but not boys' appraisals of blame were linked to internalising symptoms. Gender differences in the links between appraisals and adjustment have also been observed in response to inter-parental violence. Kerig (1998a) found that while girls and boys did not differ overall in the extent to which they reported perceived threat or self-blame in response to inter-parental violence, each appraisal played a different role in predicting the adjustment of girls and boys. Reflecting previous findings in the conflict literature,

threat was found to mediate the relation between violence and boys' anxiety, and self-blame mediated the association of violence with girls internalising. Additionally, in a test of the family wide model, Harold et al., (1997) showed that boys' but not girls' perceptions of inter-parental conflict directly affected their concurrent internalising symptoms, over and above the effect of parenting.

Also to consider, is the way that mothers' and fathers' parenting abilities may be affected by inter-parental conflict, and how children perceive each parent respectively. Some evidence suggests that conflict and violence in the inter-parental relationship has more negative effects on the father than on the mother, in terms of their role as parents (Amato & Booth, 1991; Belsky & Rovine, 1990; Jouriles & Farris, 1992), as evidenced by negativity and withdrawal from their child rearing roles (Katz & Gotmman, 1996; Lindahl, Clements & Markman, 1997; Margolin et al., 2004), although reviews of research have not found support for this contention (Coiro & Emery, 1998; Erel & Burman, 1995). With respect to the effects of inter-parental violence on parenting skills, the conclusions which can be drawn are limited owing to the lack of consideration of fathers, and their role in the parenting of children (Holden et al., 1998). With respect to the way that children perceive each parent, Osborne and Fincham (1996) showed that children's perceptions of conflict were linked with perceptions of negativity of both the mother-child and father-child relationship, although Sternberg et al. (1994) found that children exposed to domestic violence did not hold differentiated views of their parents, whilst children who were physically abused did distinguish between abusing and non abusing parents. Patterns of findings may be further differentiated dependent on not only the gender of the parent, but also the child. A second finding derived from Osbourne and Fincham's (1996) study was that conflict was more strongly related to the quality of the mother-son relationship

than father-son relationship in the case of internalising symptoms. For girls, exposure to inter-parental conflict was more strongly related to negativity in the father-daughter relationship than the mother-daughter relationship, when externalising behaviour was the outcome measure considered. These results are consistent with what may be known as the opposite gender spillover hypothesis (Howes & Markman, 1989), in that inter-parental conflict may have a greater influence on parents' behaviour toward the opposite sex child. Therefore, future research should pay careful attention to both the gender of parents and children in attempting to understand the influence of children's appraisals of family relationships on adjustment.

Future directions for research, policy and practice

The findings of this thesis represent part of a small body of research that has recently begun to delineate the processes through which exposure to parents' hostile and violent conflict may adversely affect children's psychological functioning. As this area of inquiry is in its infancy, there are multiple ways in which these findings and process oriented accounts in general, can be extended to provide further insights into the way in which children are affected by hostile and violent inter-parental conflict. The studies in this thesis were particularly concerned with children's appraisals of threat and self blame that are engendered by conflict, but these are just two aspects of children's social cognitions that may be important for understanding how exposure to conflict shapes children's evaluations of other family relationships, and children's longer term adjustment. Children's beliefs and attitudes relating to the acceptability and justification for aggressive behaviour may be a key influence on children's social adjustment (e.g. Marcus et al., 2001), and may give some insight into the way in which aggressive behaviour to which children are exposed in their family of origin, may be carried forward to influence children's future relationships with intimate

partners and their own children (Heyman & Smith-Slep, 2002; Kinsfogel & Grych, 2004; Riggs & O'Leary, 1996). Therefore, future consideration of other types of social cognition and other indices of adjustment may offer insights into mechanisms explaining the wide ranging and long lasting effects that exposure to conflict and violence may have on children's wellbeing across development.

In order to achieve a more comprehensive understanding of the types of appraisals engendered by children's exposure to violence it will be necessary to extend existing measurement tools to capture the specific experiences of children exposed to more extreme forms of conflict. Whilst there may be commonality in the way in which children appraise violent and non violent conflict, there may also be important differences. For example, as raised in Chapter 3, children's appraisals of threat may have qualitatively different foundations with children fearing for the integrity of the family in the context of non-violent conflict, and perhaps parents' lives in the context of severe violence. Further, children exposed to violence may experience feelings of guilt and shame at being unable to protect one parent from the other, rather than for initiating the violence in the first place. These distinctions may be important to capture, and are not adequately addressed by existing measures such as the CPIC (Grych et al., 1992) which were designed with non violent conflict in mind. Extension of this measure to give a more nuanced account of children's experiences of very hostile conflict in particular, would represent how researchers may build on existing marital conflict research to address questions of process that relate specifically to the effects of domestic violence on children. There should also be extensive consideration of the contextual factors that may moderate the impact of violence exposure on children, which may include the manner in which a child has been exposed to violence (e.g. witnessing, over hearing, second hand knowledge from

a parent or sibling), whether the violence between parents is unidirectional or bidirectional, and the conflict tactics employed by each parent (Edelson, Ellerton, Seagren, Schmidt & Ambrose, 2007; Fosco et al., 2007; Mohr & Tulman, 2000). More comprehensive assessment of children's experiences of violent conflict will undoubtedly reveal a host of other factors that mediate and moderate its impact on children, that will in turn provide greater understanding of ways in which restorative action can be taken in order to ameliorate the effects of seeing or hearing the ill treatment of another.

Importantly, in order that present and future research is of practical value, there is a real need for concerted efforts to be channelled in to translating research such as this, so that it may be used to inform clinical practice. Cicchetti and colleagues draw attention to the fact that research relating to basic developmental processes remains all too often removed from both clinical practice and clinical research (Cicchetti & Hinshaw, 2002; Cicchetti & Toth, 2006). Discussion earlier in this chapter drew attention to the potential applications that the findings of this thesis may have for the identification of, and intervention with, children most affected by exposure to parents' hostile behaviour. Extensive work on developing and piloting risk assessment tools and interventions targeting children's social cognitions will need to be undertaken. Intervention programmes will require rigorous evaluation as to their efficacy, which may in turn provide a unique opportunity for the continued development of process accounts of the way in which exposure to hostile and violent inter-parental conflict may affect children. Indeed, prevention and intervention studies are cited as the gold standard test of causal hypotheses, whereby change in an outcome following intervention to target a specific mechanism helps to specify the processes that are involved in the emergence of maladaptive developmental outcomes

in particular contexts (Cicchetti & Hinshaw, 2002; Cicchetti & Toth, 2006; Cowan & Cowan, 2002; Howe, Reiss & Yuh, 2002). Bridging the gap between research and practice is a particularly important priority in a field such as this, where interventions are already being implemented and policy decisions are being made in the absence of clear understanding of the mechanisms that underpin the link between exposure to risk, and child adjustment. Ensuring the efficient communication of the latest research findings may ensure that practice and policy reflect the emergent evidence base.

Overall summary

This thesis proposes that children's appraisals of inter-parental conflict and the parent-child relationship are integral to understanding how conflict across the spectrum of severity impacts on children's psychological adaptation. This thesis argues that events occurring between parents may impact directly on children's adjustment, but may also orient children's understanding of events occurring between themselves and their parents, and that consideration of children's perspectives of both these family relationships may provide a more comprehensive account of the processes through which conflict and violence may influence children's psychological wellbeing.

By disentangling processes underpinning children's adaptation in the context of low level and high-level conflict, this thesis makes significant advances in elucidating mechanisms that may explain the impact of hostile and violent forms of conflict on children. This approach permitted insights in to the variation in processes underpinning children's development as a function of conflict severity, and the index of adjustment in consideration. Where children are exposed to high levels of inter-parental hostility and violence, children's appraisals of threat appear to provide a

robust mechanism through which effects are communicated to children's internalising symptoms, whereas children's externalising symptoms are more consistently determined by the joint influence of children's awareness and appraisals of inter-parental conflict and the parent-child relationship.

The use of both community and high risk groups to elucidate more clearly, the mechanisms underpinning the link between exposure to high levels of inter-parental conflict and children's adjustment, reveals that there may be commonality in processes explaining children's adaptation in hostile and violent family contexts, suggesting that future research may be able to more usefully employ community data to begin to address questions of clinical significance. This thesis demonstrates how the marital conflict literature may be drawn upon as a roadmap to guide the development of process orientated accounts of the effects of inter-parental violence on children, serving as a place from which to begin systematic enquiry and a guide to potentially informative areas of research. The findings of this thesis lay the foundation for future research to further elucidate how children's social cognitions may mediate the impact of inter-parental violence on children's psychological adaptation. Moreover, these findings can be drawn upon to help those children most at risk of experiencing psychological harm in the wake or 'seeing or hearing the ill treatment of another' (Adoption and Children Act, 2002).

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