

4. DISCUSSION.

Analysis of the data initially investigated the consistency between the current sample and normative studies from which the measures were drawn. Across all measures, the distribution of attachment outcomes demonstrated the largest variance from the expected distribution. On this measure the current sample was found to have fewer '*avoidantly*' attached toddlers, (5% compared to 20% or 25%) than reported in other studies. Australian normative data for the Strange Situation assessment is unavailable at the present time. However, the dichotomising of the sample into '*core secure*' (B_2/B_3) and '*insecure/borderline-secure*' (A/B_1 and B_4/C) achieved a sample distribution consistent with the sample reported in Ainsworth et al. (1978). Due to the small sample size this '*core secure/insecure-borderline secure*' dichotomy is used in the statistical analysis performed.

Parent's rating of their toddler's temperament indicate that in the present sample the distribution of temperament classification, as well as reported frequencies of behavioral difficulties with the toddlers, is similar to the Australian normative data (Prior et al. 1989). In addition to this, the results of the developmental assessments of the toddlers was within the expected range for their age. Similarly, the adult measures on the California Psychological Inventory closely reflected the normative data (Gough, 1988) for both mothers and fathers as well as the distribution of

'*secure/insecure*' attachment outcomes was similar to other studies. This close alignment of the characteristics of the sample in this study with the available normative data would tend to increase the degree of confidence which can be placed in the findings.

4.1. Temperament and Attachment.

The results of this research support the central hypothesis that temperament '*match*' (i.e. parental GTR and child TTS being in the same direction) will yield a higher proportion of '*core secure*' attachment outcomes than '*mismatched*' temperaments. In the initial analysis involving toddlers' relationships with both mothers and fathers, 21.4% of the relationships that were identified as '*mismatched*' exhibited '*core secure*' attachment outcomes, compared to the '*matched*' group where 58.6% of the dyads were identified as '*core secure*'. It was not expected to find differences between mothers and fathers on these factors. The results indicate that this assumption was not correct. Dyads involving mothers evidenced clear trends while those involving fathers did not, therefore this discussion will first concentrate on the mother-toddler interaction and deal with the father-toddler interaction later.

Among the sample of mothers and toddlers none of the eight (i.e. 0%) of the '*mismatched*' relationships were identified as '*secure*' while among the '*matched*' dyads

'*secure*' attachments accounted for 63.2% of the sample. The mothers who rated themselves as above the mean on the GTR and their toddlers as more '*difficult*' on the TTS rating (i.e. '*mismatched*' dyads) were found to all have toddlers' with '*insecure/borderline secure*' attachment outcomes. Interestingly, in this study, the group of mothers who described themselves as less positive on the personality and temperament factors (GTR) and had children who were rated as more '*difficult*' (that is a negative '*match*') were found to have similar proportions of children with '*secure*' and '*insecure*' attachment outcomes (60%[3] : 40%[2]) to those dyads rated as positively '*matched*' (64.3%[9] : 35.7%[5]). Similarly, Belsky et al. (1991), studying the impact of temperament change, found that in dyads where the child's temperament remained consistently negative, "harmonious complimentary interactions" were more evident than in relationships where the child's temperament changed from negative to positive. In the context of the findings of the present study, such patterns would be expected if the changes in the child's temperament were not associated with complimentary parental changes. Among the negatively '*matched*' dyads there is no clear pattern between '*core secure*' and '*insecure/borderline secure*' groups. Within the negatively '*matched*' sample, the mothers from both the '*core secure*' and the '*insecure/borderline secure*' groups rated themselves as more negative than their toddler. These findings suggest that parental sensitivity alone is not adequate to fully explain the results. The expectation in

this study was that, within relationships the similarity of dispositions between the parent and the child (GTR and TTS) would facilitate the development of a 'secure' attachment.

Although 'match' and 'mismatch' dimensions distinguished between the attachment outcomes, parental GTR and Toddler Temperament (TTS) ratings individually were not found to be related to attachment outcome. This independence of both toddler temperament (TTS) rating and maternal disposition (GTR) with the toddler's attachment outcome, draws attention to the importance of the finding that it is the interaction of maternal and toddler characteristics that influences the quality of the developing attachment outcome. In a similar investigation to the present study, Bohlin et al. (1989) found that infant temperament ratings at four months were not related to the infant's avoidance or resistance reaction to separation and reunion within the home. However, Bohlin et al. noted that the interaction of infant 'intensity/activity' as a temperament factor with maternal physical contact was predictive of avoidance on reunion when the infant was rated as high on 'intensity/activity'. Hence, in both studies (Bohlin et al. and the current study) the significance of the infant's or toddler's temperament characteristics can only be determined in the context of the attributes of the mother. In another study Hubert and Wachs (1985) have also suggested that the effect of infant behaviour upon a parent will depend on the characteristics of the parent. Also Mangelsdorf et al. (1990) concluded in their study that neither the infant's

proneness-to-distress nor the maternal personality were related to attachment outcome, (and that in the light of the finding, the interaction of these variables was predictive of attachment outcome), "support the need to consider goodness-of-fit models in relating maternal and infant characteristics to attachment security" (Mangelsdorf et al., 1990, p. 829).

In secondary analysis of the data, comparisons were made between the maternal dispositional ratings and the toddler's temperament rating (GTR and TTS score) for the '*core secure*' and the '*insecure/borderline secure*' groups. Among the mother-toddler dyads in the '*core secure*' group a strong correlation was found between the parental GTR and the toddler TTS rating ($r=.8409$, $n=12$, $p<.001$). This contrasted with those mother-toddler dyads which were identified as '*insecure/borderline secure*', where no relationship emerged ($r=-.0042$ $n=15$ $p= ns$). The findings in this study, that the toddlers in all 8 '*mismatched*' toddler-mother dyads were identified as '*insecure/borderline secure*' attachments, as well as the high correlation between the maternal GTR and toddler's TTS among the '*core secure*' dyads only, further supports the predictive value of the '*match/mismatch*' concept. No differences were found between the groups for the fathers, however with the small sample size of sixteen fathers this result must be considered tentative.

The concept of attunement provides some insight into the results which have emerged in this study. This model

predicts a positive relationship between maternal GTR and toddler TTS ratings for the B~ group as well as a negative correlation for the A~ and C~ groups. The strong correlation found in this sample between maternal and toddler temperaments for the 'core secure' dyads ($r=.8409$, $p<.001$) is consistent with this expectation that 'attunement' between the mother and the child is one of the underlying mechanisms affecting the quality of the relationship. The 'insecure/borderline secure' group was, on the other hand, equally divided into 'matched' and 'mismatched' dyads (8 'mismatched' and 7 'matched'). Consequently it is not surprising that among this group the correlation between the maternal disposition and the toddler's temperament was not significant. However, these results may be misleading due to the unequal distribution of 'matched' and 'mismatched' dyads (19 'matched' and 8 'mismatched' dyads), with all 8 'mismatched' dyads evidencing 'insecure/borderline secure' attachment outcomes. It is estimated that a sample population with equal numbers of 'matched' and 'mismatched' dyads would yield a result closer to the expected findings (that is, A~ and C~ groups would tend to have a negative correlation between maternal disposition (GTR) and toddler temperament (TTS)).

Other studies have linked maternal attributes to attachment outcomes; Ainsworth et al. (1978) distinguished mothers of 'avoidant' infants from mothers of infants with 'ambivalent' attachments by their style of involvement with

the child. 'Secure' mothers were found, in the home situation, to be more sensitive and responsive to their infants than the mothers of 'insecure' infants. Clarke-Stewart (1973) indicated that these relationships are by their very nature mutually rewarding for the mother and the child. While the results of this research are consistent with the explanation that underlying mechanisms of attunement between the mother and the toddler operate to effect differences in relationship qualities, the alternative explanation that maternal sensitivity alone determines the quality of the relationship, does not explain those relationships in which the mother views her own disposition as less positive, and their toddler as more 'difficult' (i.e. a negative 'match') resulting in toddlers with 'core secure' attachment outcomes. Maternal sensitivity (measured psychometrically through questionnaires) is insufficient to explain these results. Similar to the findings of the current research, Mangelsdorf et al. (1990) concluded in their paper that "none of the maternal measures was directly related to the molar attachment security classifications" (p. 829); this was despite 'Maternal Supportiveness' being one of the factors measured.

The construct of parental sensitivity was expected to be tapped, psychometrically, through the GTR measured. More sensitive mothers and fathers were expected to rate higher on the GTR than less sensitive parents. Research by Ainsworth et al. (1978) and Clarke-Stewart (1973) also suggest that

high levels of parental sensitivity are related to 'core secure' attachment outcomes. In the present sample, parental GTR (either for the parents as a group or mothers and fathers separately) was not significantly related to the attachment outcome for their infants. A review of the factors assessed in the GTR suggests that this measure may have in fact been more sensitive to measuring an adult form of 'easy/difficult' temperament and not as effective in assessing parental sensitivity. Based on descriptions of the CPI factors employed (Gough, 1988), low scores on the GTR infers a more cautious person who has difficulty coping with changes, has less control of negative feelings and who tends to be self doubting. Notwithstanding this the GTR continues to be a useful measure for the assessment of the 'match/mismatch' hypothesis being researched.

The differences between the 'matched' and 'mismatched' groups in attachment outcomes were reflected in the toddler's reunion behaviour following the second and most stressful separation. Toddlers in 'matched' relationships demonstrated lower 'contact maintaining' and 'proximity seeking' behaviours following the second separation than the 'mismatched' group. This difference between 'matched' and 'mismatched' dyads in the toddler's reunion response towards the mother suggests that the toddlers in the 'matched' group used more distal interaction than toddlers in the 'mismatched' group and presumably re-establish their sense of security more quickly than the 'mismatched' group. The

absence of differentiation between the two groups ('matched' dyads and 'mismatched' dyads) on factors of avoidance and resistance in reunion episodes is consistent with the understanding that behavioural traits which are considered to be temperamentally based (Belsky and Isabella, 1988) do not in themselves distinguish between attachment outcomes. That is, the toddler's way of expressing anger or disappointment directed at the mother on her return did not differ between the 'matched' and 'mismatched' groups. It is the interaction of the overall dispositions of the mother and the toddler which influences the nature of the attachment.

Interestingly though, this sample shows that within the '*insecure/borderline secure*' group the temperament of the toddler may play an important part in how this insecurity is expressed. The '*easy*' toddlers were all classified as B₄/C while those toddler's classified as '*difficult*' tended to be evenly distributed among the A~ and C~ groups. While the temperament of the toddler did not determine the quality of the toddler's attachment outcome with the parent, their temperament did, however, appear to influence the way in which the insecurity was expressed. Those results suggest that the underlying dynamics are such that toddlers who are rated as having an '*easy*' temperament but are '*insecurely*' attached express their feelings associated with the separation more directly, while those rated as '*difficult*' are equally likely to express their feelings directly or indirectly. However, the pattern observed in this sample,

that is toddlers rated as '*easy/intermediate-low*' and '*anxiously*' attached, is opposite to the expected outcome proposed by Belsky and Isabella (1988) and the findings of Belsky and Rovine (1987). In both those studies it was speculated that '*easy*' children would be more capable of self regulation than '*difficult*' children in the stressful periods of the attachment assessment. Belsky and Rovine (1987) noted that their data was supportive of the understanding that "newborns who display less central nervous system integrity are more likely to display insecurity in a resistant as opposed to avoidant manner, with the reverse being true of newborns whose behavioural systems are more organised" (p. 793). Subsequently the '*easy*' children would be less prone to stressful reactions upon the parent's return. This interpretation, that children rated as temperamentally '*easy*' would have better self-regulation of their feelings, is not consistent with the findings of Ainsworth et al. (1978) that '*avoidantly*' attached and '*ambivalently*' attached infants are equally distressed in the separation episodes. From Ainsworth's data it appears that although the behavioural patterns are different, the '*avoidantly*' attached infants are no better at regulating the stressful experiences than the '*ambivalently*' attached infants, and they differ only in their way of expressing those feelings.

While the data indicates that the interaction of toddler temperament and maternal GTR is significantly related to attachment outcome, a question which emerges is: "How

objectively have parents rated their toddlers?". The explanation that the mother's perception of the toddler's temperament is predominantly influenced by the mother's own internal state, as has been suggested in some other studies (Sameroff et al., 1982; Vaughn et al., 1987), does not appear to be a factor of this sample. Mothers and fathers demonstrated a significant amount of agreement in their ratings across all temperament factors on the TTS except for 'Distractability' and 'Threshold'. The inter-parent correlation of the child's temperament factors was consistent with other reported studies ($r=.55$ to $r=.7$). While some authors have argued that such correlations would be unacceptable for personality questionnaires, the parent's rating of the child's temperament is based on that parent's relationship with the child and subsequently it is expected that the differences in parental ratings will emerge as a result of those differences. In this study parents were asked to complete the temperament questionnaires independently. Other than this instruction to the parents there was no other mechanisms used to ensure the independence of the parent's response. However, the consistency in the correlations with other studies contributes to the confidence that the parent's responses were indeed independent. Therefore, the high levels of agreement on the toddler's temperament between the parents and the finding of independence between TTS ratings and attachment outcome suggest that the maternal reports of their toddler's temperament is not simply reflecting the mother's own

personality nor the quality of her relationship with the toddler. This result is consistent with other research, where the parent's overall perception of the child's temperament has been found to be independent of the child's attachment outcome (Vaughn, Lefever, Seifer & Barglow, 1989). However, Kemp (1987) has reported significant relationships between attachment outcomes and some temperament factors (mood, flexibility and approach). In the present research the toddler's 'Mood' rating (by the mother) was the temperament factor most closely related to the attachment outcome among the 27 mothers ($r=.3648$, $n=27$, $p=.031$, significance for this correlation was set at .005 to account for the number of analyses used). The fathers' ratings of the toddler's temperament indicated that the temperament factor of 'Intensity' achieved the highest correlation with the toddler's attachment outcome to the father ($r=.3881$, $p=.062$, significance for this correlation was also set at .005 to account for the number of analyses used). While the temperament factors of 'mood' and 'intensity' were below significance in the analysis, the strength of the relationships in comparison to other temperament factors, is consistent with Kemp's findings, as well as with differences in maternal-toddler and paternal-toddler relationships, discussed later in this section.

4.2. Father-Toddler Relationships.

The fact that mothers and fathers did not follow a similar pattern in the distribution across groups ('match/mismatch' vs 'core secure/insecure-borderline secure') suggests either that the Strange Situation assessment does not have the same significance in the assessment of the toddler's attachment to the father as to the mother, or that the interaction of the toddler's temperament (TTS) and the parent's personality (GTR) is valid only for mothers (or primary caregivers) and does not have the same significance within the father-child relationship. It can be argued that the fathers' relationships with their toddlers follow different developmental paths from that observed with the mothers. Even though Lamb (1978) notes that paternal-infant attachment is clearly established by the age of 6 months, fathers are culturally encouraged to be less involved with infants than mothers, resulting in the attachment between the child and the father commencing when the child attains a more active involvement in the interaction, at around six to eight months of age (Ricks, 1985; Lincon, 1984). Despite findings which report high levels of paternal involvement with the child at and immediately after the birth of the child (Svejda, Pannabecker & Emde, 1982), Russell (1987) notes that the father's traditional role with children has involved them more in play than in child care activities. Following this pattern, in the current study parental responses to questions related to the care of the toddler indicated that the fathers were

consistently less involved in the child care than the mothers. Lamb (1982) notes that "as yet, no one has demonstrated whether the same factors (as for the mother) account for individual differences in the security of infant-father attachments" (p. 200). Svejda and Emde (1982), critical of the manner in which attachment and bonding theory has dominated some early childhood practices (without insight into the findings and theory), note that it has been fortunate that the development of father-child relationship has not been as heavily scrutinized, allowing this relationship to develop without strong social expectations.

Contrary to the expectations of this study, the toddler's attachment outcome to the mother and to the father were surprisingly similar. The chi square analysis indicates a significant interaction between the toddler's attachment to the mother and to the father ($p < .05$ for the A~, B~ and C~ re-groupings, and $p = .001$ for the traditional A, B and C groupings). However, the low sample number necessitates that these findings are treated tentatively. The descriptive results reported earlier (i.e. toddlers in 15 of the 17 families, where both parents were involved in the attachment assessment, were found to have attachment outcomes to one parent that are within one sub-classification of their attachment outcomes to the other parent) offers a challenge to the central position of this paper that the 'match' of each parent's GTR with the toddler's temperament rating (TTS) would effect the toddler's attachment outcome with that

parent. Drawing upon the underlying principles of the Attachment model proposed by Bowlby, these results support the concept that the toddler's attachment to the mother establishes the central relationship model for the child and that other relationships (including the relationship with the father) build upon this formative experience. This explanation is more viable within the current results than explanations which indicate that the child establishes multiple internal models based primarily on the quality of the interaction with each caregiver. This later model has been proposed by Ainsworth (1972), who states that "Presumably, the organisation of attachment to each figure reflects the infant's history of interaction with that figure rather than temperamental traits predisposing the child to be generally 'secure' or 'insecure' in his relationship" (p. 48).

4.3. Attachment and Play.

The central tenet of this research is expressed in the hypothesis that the interaction between the parent's disposition and the child's temperament will affect the nature of the overall relationship. Insights into the effect of this interaction were sought through the quality of the child's attachment to the parent as well as the synchronisation of the parent's and child's interaction during a semi-structured play assessment. Belsky, Lerner and Spanier (1984) suggest in their review of studies relating to

attachment and maternal and contextual factors that "the quality of attachment is the result of early interactional experience, which itself is determined by characteristics of the mother, the infant, and the broader context in which the mother-infant relationship develops (i.e. family, community)" (p. 54). The majority of studies assessing the relationship between attachment and play have found that in relationships with '*securely*' attached children there have been increased maternal involvement (Slade, 1987), maternal support (Frankel & Bates, 1990), infant relationship orientation rather than object orientation (Lewis and Feiring, 1989), maternal responsiveness (Dam and IJzendoorn, 1988) and less parental control (Frodi, Grolnick and Bridges, 1985; Weininger, 1983) than in relationships with '*insecurely*' attached children. Studies involving the 'goodness of fit' of maternal and infant characteristics have found that '*securely*' attached dyads are rated as being more synchronised in their interactions during the early months of life (Isabella, Belsky & Von Eye, 1989; Isabella & Belsky, 1991). In their studies (Isabella et al. 1989; Isabella & Belsky, 1991) it was found that '*avoidantly*' attached dyads were characterised by maternal intrusiveness while '*ambivalently*' attached dyads were characterised by maternal inconsistency. Main (1973 - reported in Cassidy, 1986) found that resistant infants showed the least engagement with their toys in play. Cassidy (1986) found that the B₃ infants had the least difficulty negotiating the environment (these measures were based on the child's clumsiness in the play with the mother). She

suggests that it is likely that a combination of maternal and infant characteristics play a role in the infant's ability to negotiate the environment.

In this present sample, neither attachment outcomes ('*secure*' vs '*insecure/borderline secure*') nor temperament classifications ('*easy*' vs '*difficult*') demonstrated significant differences between the groups on the amount of synchronisation observed in the semi-structured play situation. Analyses which assessed the fathers and mothers independently also indicated no significant difference between the '*matched*' and '*mismatched*' groups. These unexpected results present a challenge, as previous studies, outlined above have consistently identified relationships between attachment and mother-child interaction.

There are two possible explanations for the failure to observe these relationships in this study. Firstly, that play procedures are not always effective in tapping underlying relationship qualities. Gaensbauer, Harmon, Culp, Schultz, Van Doorninck and Dawson (1985) found no significant difference between A/B/C groups on measures related to free play in the laboratory by 12 month old infants. Their measures included the infants' quality of play, and their efforts to involve and share the play with the mother. These authors regrouped the sample of 65 in two groups, a '*clinically secure*' and a '*clinically insecure*' group, and in those groups differences were found in the infants' quality

and frequency of interaction, social use of the toy and vocalisation within the interaction. Their clinical classification however, was more restrictive than the traditional attachment groups; 37 of the 65 infants in the sample were not included using their criteria. Of the 28 infants left in the sample, the '*clinically secure*' group contained only 'B' infants while the '*clinically insecure*' group consisted only of infants classified as 'A' or 'C'. Hence, laboratory play procedures may fail to tap the differences in relationship qualities because of the inclusion of borderline attachment outcomes. Another possibility is that the inherent demand characteristics of such assessments affected the outcomes. In this study the instructions to the parent to "play with your child in whichever way you think you can have the most fun" may have contributed significantly to the levelling of the differences between the parent's responses and synchronisation.

Secondly, measures of synchronisation employed in this study may not have been sensitive enough to differentiate between attachment groups. In this sample there was also a smaller than expected number of '*avoidantly*' attached toddlers. It is the '*avoidantly*' attached group which has been associated most strongly with negative maternal characteristics. Belsky and Isabella (1988) reported that among this group of children, maternal responses to their infants (at ages 3 months and 9 months) tended to be independent of the infant's behaviour. However, the mothers

of *'ambivalently'* attached infants tended to be "poorly timed" in their responses, suggesting that mothers of these infants were struggling in their attempts to respond to their child while the mothers of the *'avoidantly'* attached children were less emotionally involved. In this study, in order to obtain a meaningful statistical analysis, the *'avoidantly'* and *'ambivalently'* attached children were grouped, however this possibly led to the masking those expected differences in parental style.

The results of the interactional assessment of the parent and toddler in the present study (conducted when the toddler was 18 months of age) are incompatible with the results reported by Isabella et al. (1989). While the data in this study give no insight into the differences between the studies, it is speculated that two factors have contributed to the absence of significant differences between attachment groups, temperament classification or *'match/mismatch'* rating with the level of synchronisation observed in the *'Kangaroo Box'* assessment procedure. The first is the nature of the assessment in the present study, and the second is the age of the child. Older children are more capable and involved within the relationship by making adjustments in their responses to *'fit'* into the style of their parents, than infants of three to nine months of age.

5. CONCLUSION.

The findings in this study suggest that the interaction between maternal and toddler characteristics are related to the quality of the toddler's attachment to the mother. Within the study there were five significant findings which support the adoption of the major hypothesis.

These findings are outlined below:

1. Toddler temperament (TTS) was not related to attachment outcome.
2. Parental characteristics (GTR) was not related to attachment outcome.
3. In mother-toddler dyads, 'match/mismatch' distinctions were found to be related to the toddler's attachment outcomes, such that 'mismatched' dyads had no toddlers with 'core secure' attachment outcomes while the 'matched' dyads had 63.2% of toddlers with 'core secure' attachments.
4. Father-toddler dyads did not evidence significant relationships between the interactive measure of 'match/mismatch' and the toddler's attachment to the father.
5. A significant correlation between the maternal GTR and toddler TTS was found in dyads with toddler's who had a 'core secure' attachment to their mothers but not for those toddler's who had an 'insecure/*borderline secure*' attachment to their mothers.

In order to maintain the potential for statistical significance the measures used in this study were classified into broad categories (e.g. above or below the mean for GTR and TTS, 'easy/intermediate low' and 'difficult/intermediate high' temperaments, core-secure and insecure/borderline secure attachment outcomes) and as such the analysis becomes vulnerable (through the development of heterogeneous groups) to the possibility of failure to support a valid hypothesis. Notwithstanding these broad categories, significant results were found for the core hypothesis. Studies involving complex areas of research and where the level of commitment needed by the subjects act against a large sample size, there is a need to acknowledge the potential to attract a skewed representation of the population from which conclusions will be drawn. In this respect the present study was found to have a sample distribution which reflected normative data across all measures. As a result of such limitations, the conclusions can only address the issues in the broadest manner. In this study that involves supporting the notion that the 'match/mismatch' dimension of a parent-toddler relationship is related to the quality of attachment the toddler has with the mother.

While the results are considered as supporting the understanding that attunement between the toddlers and their mothers contributes to the development of a secure relationship, the dynamics which effect the attunement model are likely to be complex. Although the findings in this study suggest that parental reports of their toddler's

temperament is not related to the parent's own disposition, it may, however, reflect the nature of their relationship with the toddler. Mebert (1991) suggests that parent's perception of their infant's temperament contained some projective aspect through a process where the parents "attend particularly to behaviours that fit their biases and will elicit behaviours that confirm their beliefs" (p. 360). However, Mebert's (1991) explanation of the process may also be employed in understanding the development of attunement between mothers and their toddlers. In relationships where the parent and the toddler are acting in a complimentary manner, this would effect a mutually rewarding relationship; even where the individuals are prone to be 'more difficult' in their dispositions. While in relationships which are characterised by the individuals having conflicting or non-complimentary dispositions, the effect of finding that the other person's (parent or child) disposition does not fall within expected beliefs may add stress to the relationship.

The attachment-temperament debate has drawn clear lines between researchers. Such reactions are indicative of legitimate perspectives existing for both sides. In this study, and in recently emerging trends (Mangelsdorf et al., 1990), the idea that temperament has an indirect influence on attachment through its interaction with maternal characteristics is operationalised in the 'match/mismatch' concept.

While this study addresses the attachment and temperament questions debated by researchers, the formative questions for myself were drawn primarily from clinical issues related to children in foster care. The effectiveness of foster care, as an intervention for children at risk of abuse or neglect, has been strongly debated. Those who have argued that foster care is not beneficial, draw attention to the instability of such placements, the effect of multiple placements upon the child, and the high level of behavioural problems among foster children. Palmer (1990) found that the foster children in their study (7-16 years old) were more vulnerable to self-esteem problems as a result of the separation from their natural families. Others have argued that children in foster care are no more likely to experience behaviour problems than children raised in their natural family, and in fact, respond quickly (emotionally and developmentally) to the improved social and physical conditions. Without opening the debate any further it would seem that children's experience in foster care is as varied as children's experiences in natural families. Doelling and Johnson (1990) note that most children in foster care experience only one placement, while 10% of children in care experience four or more placements. These authors suggested that early disturbed family experiences and separation from their natural families predisposed the children to becoming more vulnerable to emotional problems than non-fostered children.

Repeated foster placements has been consistently viewed as the single most disruptive feature of the 'welfare system' (Doelling and Johnson, 1990; Palmer, 1990; Widom, 1991; Steinhauer, 1991). Steinhauer and Snowden (1991) suggest that the matching of foster family expectation with the child's needs is a crucial aspect of successful adoption. Poorly **matched** or **mis-matched** placements in foster care have been identified as a factor in placement breakdown. Doelling and Johnson (1990) found that the combination of both a foster mother's 'rigid' personality and a temperamentally difficult foster child, or if the child was more difficult than the foster mother had expected, led to an increase in risk of a foster placement breakdown. Similarly, Widom, (1991) suggested that more consideration needs to be given to the characteristics of the child being fostered in placement decisions. The current study was designed to investigate the clinical question of **match-mismatch** of parent and toddler temperament which is arising in foster care. It was not possible to study the impact of **match-mismatch** in foster care situations given the sample requirements for such research. Furthermore, the questions which arose from the clinical observations (that is the role of **match** and **mis-match** of dispositions between the parent and the child) were found to be equally applicable to 'intact' families drawn from the general population.

The results of the study are consistent with the clinical perceptions from which the questions emerged. The findings that the '*match/mismatch*' interaction is related to

the quality of attachment, translates into the need for clinical practices to consider both the caregiver's and the child's dispositions. It is well recognised among clinicians that helping parents to understand their child's temperament facilitates closer bonds (Carey, 1982). In the context of the present results, self-awareness by the parent will further facilitate this bond between the parent and the child. The results also provide some rationale to how parents develop strikingly different reactions to different children within the family. This is an aspect of attachment which is not addressed in the Bowlby-Ainsworth model of attachment. In each of these clinical areas further research is necessary. The task of such research is firstly to re-establish the central finding of the interaction between *'match/mismatch'* and the toddler's attachment quality with the parent and then proceeding to investigate the processes which facilitates this.

An unexpected but significant finding of the study is the clear differences which arose between fathers and mothers in the operationalisation of the interaction between the toddler's temperament and the parent's disposition. While the central hypothesis was supported by the data for relationships involving toddler's and their mothers (primary caregivers), it was not supported for those relationships involving toddlers and their fathers. The implication from this finding is that children's attachments to the father follows different developmental pathways and/or that the measures employed in the Strange Situation assessment may not

accurately reflect the quality of the child's attachment to the father. Ainsworth and Wittig (1969) have identified four behavioural indices which distinguish the quality of the child's attachment to the mother, when observed and rated in reunion episodes. These behavioural indicators are reflected in Gewirtz's (1972) indices of attachment and dependency. On each index the focus is placed upon the extent to which the child uses the carer as a respite from stress situations and subsequently draws heavily upon the mothers' soothing and calming qualities. Most fathers have clearly different styles of interactions with the child. As such it would appear that attachment assessments for the father-child relationships would require different procedures and indices to effectively tap the quality of this relationship. If this is so, a suitable procedure to measure father-toddler attachment needs to be developed.

The central role of the mother as an attachment figure has been suggested by Bowlby (for reasons of availability and possibly genetic predisposition) and Ainsworth (as a result of the mother's availability and sensitivity to the infant's signals). Bowlby notes that during the early months of the infant's attachment, the mother holds a singular importance for the infant. However, this changes as the infant's attachment to the father and other attachment figures (siblings, relatives and other adults) emerges with the development of the child's social awareness. Hence, Bowlby's model of attachment identifies the mother as the usual primary attachment figure and the father as the "subsidiary

figure" (1969, p.305). Nugent (1987) notes that "current research suggests that infants do form attachments to their fathers as well as their mothers (Lamb, 1976) and that fathers and mothers have different styles of interaction with their infant" (p. 178). However, Nugent argues that, when parents are exposed to similar infant/parent relationships the fathers are just as nurturant as mothers in their relationship with the infant.

As both fathers and mothers style and role in the care of the infant converge during the infant's first year, research must address the question of how the infant accommodates the possibility of two equally available sources of 'working models' of attachment. Ainsworth (1990) discussed the emergence of dual conflicting 'working models' of attachment, from the same attachment figure. In these circumstances the child develops a semantic model of attachment (derived from the content of the mother's messages) while also being influenced by a less accessible and unconscious attachment model (derived from the emotional meaning of the attachment figures behaviour towards the infant). Similar understandings have been suggested by Bowlby (1975, p. 238; 1981, p. 230) and Cassidy (1990). While Bowlby (1975) has suggested that the child develops separate 'working models' for each attachment figure, he also notes that "In a person suffering from emotional disturbance it is common to find that the model that has the greatest influence on his perceptions and forecasts and therefore on his feelings and behaviour is the one that develops during

his early years and is constructed on fairly primitive lines" (p. 238). Hence, Bowlby supports the primacy of the maternal model in the development of the child's attachment. Other researchers (Bretherton et. al., 1990; Cassidy, 1990) suggest that Bowlby's ideas do not offer sufficient explanation for how the child accommodates multiple models of attachment.

In the present design, although the interaction of the father's and the toddler's temperaments were not significantly correlated to attachment outcome, the toddler's attachment to the father was found to be related to the toddler's attachment to the mother. This singular link between the parents with respect to the development of the toddler's attachment infers that (using the present criteria for attachment) the child's attachment to the mother may be viewed as the formative relationship, and that subsequent relationships for the child build upon expectations developed within this framework. This understanding is consistent with the attachment model proposed by Bowlby, who suggests that the infant's first and earliest attachment figure is of special significance in later development.

Furthermore, the significance of the finding that the '*goodness of fit*' between the toddler's temperament and the mother's temperament clearly helps to explain the development of relationships within the family. These results provide some understanding of the emergence of difficulties within mother-toddler relationships without the need to rely upon critical evaluation of the mother's level of responsiveness.

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