

## State of the art:

# Attachment

It was a bold claim, and one now familiar to most psychologists from their undergraduate days: that immediate and long-term benefits to mental health result if an 'infant and young child should experience a warm, intimate and continuous relationship between child and mother (or permanent mother-substitute) in which both find satisfaction and enjoyment' (Bowlby, 1951, p.11). This 'attachment theory' and its founding father retain their influence. A survey this year asked 1500 doctoral-level members of the Society for Research in Child Development (SRCD) to name 'the most revolutionary study in child development' over the last 50 years (Dixon, 2002). Bowlby (1969) was the third most cited study (after Piaget and Vygotsky), and Ainsworth *et al.* (1978) came in fourth with their 'strange situation' measure of attachment.

But in the 50 years since Bowlby's claims, there have been vast changes in society's assumptions about and organisation of family life. Can attachment theory still be relevant? This article aims to highlight some of the major achievements in attachment theory and research over the past 15 years, which have confirmed and extended its position as the most powerful contemporary account of social and emotional development available to science.

The 'strange situation' gets a clinical focus

There is a novel clinical focus to contemporary attachment theory and



**HOWARD STEELE** discusses whether attachment theory has kept pace with the changing family.

research. This owes much to the discovery of attachment disorganisation (Main & Solomon, 1990; Solomon & George, 1999a), a vitally important extension and revision to the classic 'strange situation'.

Approximately 10 per cent of 'low-risk' (middle-class, non-clinical) samples and more than 50 per cent of high-risk (especially maltreated) samples show marked and pervasive fear in the presence of the parent. This behaviour does not fit easily into the three classic patterns of infant-parent attachment identified by Ainsworth *et al.* (1978; see box), which have come to be regarded as organised strategies for maintaining the relationship with a predictable caregiver. In contrast, the disorganised or 'D' pattern of infant-caregiver attachment is seen as a collapse in behavioural and attentional strategies, often resulting from a caregiver prone to unpredictable and frightened or frightening behaviour (see Hesse & Main, 2000; Lyons-Ruth & Jacobvitz, 1999).

The unduly frightened infant is prone to develop into a school-age child who is highly controlling, in either a punitive/aggressive or compulsively compliant and caregiving manner

(Solomon & George, 1999a). The latter is perhaps most often seen in the 'inverted' roles of children of mentally ill mothers who know where mother's medication is, remind her to take it, and bring it to her. Infant disorganisation has been shown to lead to severe problems in social relations during the school-age years (Jacobvitz & Hazen, 1999), and deficits in cognitive skills (Moss *et al.*, 1998). Perhaps most striking among these long-term correlates of infant attachment disorganisation are dissociative and behavioural problems in late adolescence, as indicated by self-report as well as teacher ratings (Carlson, 1998). Thus, the early infant-mother relationship has far-reaching consequences for the developing child's later mental health, as Bowlby suggested over 50 years ago.

Developmental neuroscience and behaviour genetics

The long-term consequences of infant experiences may be due to ongoing pronounced disturbances in the caregiver's ability to provide a secure base within the home (Solomon & George, 1999b). But a 'state of the art' account of attachment theory must allow for the possibility that early trauma might sensitise and compromise brain development (see Perry *et al.*, 1995; Schore, 2000), or that the child's genetic make-up may play a part.

This behaviour genetics approach to attachment disorganisation was taken in a Hungarian sample of 90 low-risk one-year old infants (Lakatos *et al.*, 2000). Attachment disorganisation was four times more frequent among children carrying at least one 7-repeat allele of the dopamine D4 receptor gene. Moreover, in the same sample where 17 were classified disorganised with mother at one year, this

### AINSWORTH'S ATTACHMENT PATTERNS

In the original study, 10- to 24-month-old infants were subjected to a strange setting, the entrance of an unfamiliar female, and two brief separations from the parent. Their behaviour on being reunited with the parent was observed and classified into three attachment patterns:

**Insecure-avoidant or 'A'** Turns away or moves away from parent upon reunion; mood is flat, and play is not effective or animated.

**Secure or 'B'** Happy to see the parent upon reunion, settles if distressed, and returns to often joyful play.

**Insecure-resistant/ambivalent or 'C'** Both seeks contact and angrily (or passively) rejects it when offered, remaining upset and ineffectual at play.

# theory

risk increased tenfold if the DRD4 gene was present alongside another independent identifiable allele (Lakatos *et al.*, 2002).

This Hungarian study is fortunately longitudinal in design, and much information on the genetic and behavioural profiles of the parents is yet to be reported. It is probable, but remains to be demonstrated, that the widely reported adverse social and cognitive deficits likely to follow from infant disorganisation may not be present in children who carry the genetic risk but who have been parented in a sensitive and supportive manner. On the other hand, it may be that parents highly prone to frightening or frightened behaviour – whose infants we know are likely to have disorganised attachments – may have such influence even in the absence of pronounced constitutional risk in the child. Future research will further chart these interacting influences of nature and nurture.

What appears to be well established in the literature is the claim that infant–parent attachment patterns are largely acquired, rather than determined by one’s genetic or biological make-up. This long-standing claim has recently been tested in a twin study by O’Connor and Croft (2001). They looked at the child–mother attachments of 120 twin pairs of pre-school-age children, with balanced numbers of identical and non-identical pairs. As levels of concordance in security to mother did not differ between the groups, the findings did not support any medium-to-strong influence of genetic make-up upon the observed quality of a child’s attachment to mother. These results are compelling, even in light of the controversy concerning twin methodology as a technique for identifying what are very difficult to isolate heritability effects (e.g. Schonemann, 1997).

As for temperament, the most commonly assumed emotional expression of one’s genetic make-up, a number of studies have shown that an irritable, difficult temperament need not lead to an insecure infant–mother attachment. In a classic study Crockenberg (1981) showed

that mothers with sufficiently high levels of social support help their irritable babies to develop secure attachments. More recently van den Boom (1994, 1995) has shown that brief therapeutic interventions aimed at facilitating and improving mothers’ sensitivity and responsiveness can result in dramatic and enduring increases in secure attachments among cranky infants. These studies are neat examples of how nurture can triumph over nature.

## But what about fathers?

Corollary evidence that infant–parent attachment is predominantly a relationship-specific construct, as opposed to a characteristic of the child *per se*, comes from longitudinal studies that have included fathers as well as mothers (e.g. Steele *et al.*, 1996). In this example from my own work, 96 infants were observed in the ‘strange situation’ with mother at 12 months, and 90 of these infants were later observed with father in the ‘strange situation’ at 18 months. Both the mothers and the fathers were interviewed

individually with the Adult Attachment Interview (AAI) (George *et al.*, 1985) before the birth of the child. The AAI principally focuses on the adult’s thoughts and feelings about attachment relationships with their own caregivers (see box next page).

In this work we observed that the infant–mother attachment was predicted by mother’s interview, whilst the infant–father attachment was *independently* predicted by father’s interview. Thus the infant develops a relationship to their father based primarily not on the model of their relationship to mother, but upon father’s representation or model of his own family of origin. Such findings call into question Freud’s (1940/1961) oft-cited claim that the child’s early relationship to mother is the prototype for all later love relationships. Interestingly, in this study a few children were disorganised in their attachments to mother and a few with father, but none were disorganised with both parents.

Further follow-ups of this sample at 6 and 11 years have pointed to unique long-term influences of the early mother–child



as opposed to early father–child relationships. Independent reports from longitudinal attachment studies of mothers, fathers and their children point to inner-world emotional lessons ‘taught’ by mothers, and more outer-world social lessons ‘taught’ by fathers (see Suess *et al.*, 1992; Verschueren & Marcoen, 1999). Specifically, it is in the early and ongoing mother–child relationship that children appear to acquire their understanding of complex feelings, including the ability to acknowledge distress in others and the capacity to generate a flexible coping strategy (Steele *et al.*, 1999; Steele *et al.*, in press). By contrast the early father–child relationship appears to uniquely influence the child’s perceived functioning in peer relationships and overall self-report of behavioural problems at the onset of adolescence (Steele & Steele, 2001).

**Implications for children of separated or divorced parents**  
The research on maternal and paternal influences on children’s development suggests that each parent has a vital and independent (if also overlapping) influence on the child. Thus, both separation and divorce inevitably involve some sense of loss that requires resolution. No attachment researcher has underscored this point as frequently or as urgently as Inge Bretherton.

Using diverse samples, Bretherton has gathered large numbers of emotion narratives in response to the depiction of domestic and moral dilemmas. Narratives from children who have experienced divorce inevitably and universally appear

to reflect loss and longing (e.g. Page & Bretherton, 2001). Her work points to the remarkable capacity early school-age children have for metaphorically depicting their wishes for a reunion between their parents, and their implicit acceptance of the improbability of their wishes being realised. Acknowledgement of the sadness and pain, alongside evident coping and resourcefulness in the child, is most likely to arise from those family contexts where there is high-quality communication between the parents and low parental conflict (Solomon & George, 1999a).

Solomon and George base their conclusions on the first systematic investigation of the effects on infant attachment to mother and to father of the increasingly common practice of overnight visitation (time-sharing) with the father in separated or divorced families. In a nutshell, when conditions of visitation were poor, involving low psychological support or protection of the child along with high levels of parental conflict, there were significantly elevated levels of insecurity and disorganisation to both parents in the overnight visitation group. This study incorporated detailed interviews with each parent, revealing the powerful mediating effect of parental thoughts and feelings about the other parent and the child upon whether the visiting arrangements were seen to adversely affect the infant’s attachments.

UK divorce levels are on the rise, albeit not yet at American rates. The proportion of men and women separating after five years of marriage rose from 7 per cent of



those married between 1965 and 1969 to 13 per cent of men and 16 per cent of women married between 1985 and 1989 (General Household Survey, 1998). This discrepancy between the sexes is due to the different ways men and women responded to the survey – women being perhaps more open concerning relationship difficulties. Attachment research is still in the ‘early days’ of investigating the effects of separation and divorce on children’s social and emotional well-being. Clearly, because of the sensitivity of attachment research methods to the inner emotional experience of the individual, future investigations into the effects of divorce will be well served by the inclusion of an attachment perspective.

### The meaning of attachment experiences

The contribution of attachment research over the last 15–20 years to understanding child development, and promoting personal and family well-being, may arguably be seen to derive from the development of the AAI, and a corollary rating and classification manual (Main & Goldwyn, 1987). As early as 1949, in what is widely regarded as the first family therapy paper, John Bowlby commented on the immense clinical usefulness of interviewing parents about their thoughts and feelings over their family of origin. The AAI provides a

## THE ADULT ATTACHMENT INTERVIEW – WHAT’S YOUR PATTERN?

**Dismissing** You were parentally rejected or neglected during childhood, but you mention this only indirectly. You work hard to protect your unrealistically positive (idealised) or normalised image of your parents and of your childhood. You have difficulty with recall of childhood, don’t quite see the point of narrating your past, and tend to dismiss (or devalue) the significance of childhood attachment relationships.

**Autonomous** You were well-loved and supported by your parent(s) during childhood, and/or experienced adversity and perhaps severe pain (e.g. loss or abuse). You are neither derogating of, or unduly angry towards, your parents. You understand the past, and the influence of this on the present. Yours is a coherent, credible narrative that conveys a strong valuing of attachment.

**Preoccupied** You had many caregiving duties towards your parent(s) during childhood such that roles were frequently reversed, with your attachment needs being compromised. You are angry and confused (perhaps fearful) about your childhood relationships with caregivers, and their influence on you in the present. You value attachments, but the task of narrating your experiences is rather painful and involving.

**Unresolved** You have suffered past loss or trauma during childhood or adulthood and you are still grieving. You feel responsible in some way for the loss or trauma that is unreasonable, indeed impossible – but you don’t yet see it. The loss or trauma does not yet belong to your past. *Note:* Interviews fitting with the unresolved pattern are also assigned to the best fitting of the three alternatives.



thorough assessment of the meaning (to the respondent) of attachment experiences, including painful childhood experiences that have happened to everyone (e.g. separations, rejections, emotional hurts), as well as painful experiences that have happened to some people (i.e. loss or abuse).

Importantly, the AAI asks not only about probable past experiences (e.g. 'Tell me about your relationship with your parents from as far back as you can remember') but also about current thoughts and feelings regarding attachment: (e.g. 'Why do you think your parents behaved as they did during childhood?' and 'Do you think your childhood experiences have an influence on the kind of adult person you have become?'). These latter questions tap the extent to which the adult speaker is able to monitor their speech, feelings and thoughts arising from the interview in a reflective and balanced manner that is suggestive of the ability to respond promptly and appropriately to a child's emotional signals. It is these elements of the interview that lead a trained rater ultimately to assign the interview to one of three groups: autonomous (predictive of secure infant-caregiver attachments), dismissing (predictive of anxious-avoidant attachments) or preoccupied (predictive of anxious-resistant attachments (e.g. Steele *et al.*, 1996). In other words, the AAI is a

measure of effective parenting with broad implications for how the changing family is studied, and (where indicated) counselled or treated.

Perhaps the most vital implication arising from research using the AAI is the essential need for victims of childhood loss and trauma – particularly those with planned or actual parenting or caregiving duties – to be helped toward resolution of the complex feelings of guilt, anger, fear and confusion that so often haunt them. Unresolved or still grieving responses to questions concerning past losses or abuse are highly common in clinical populations (Wallis & Steele, 2001). In contrast, reviews of studies of the normative population reveal high levels of resolution and coherence regarding past adversities (e.g. Steele & Steele, 2000). In other words, given two victims of a similar trauma, the AAI has the potential to identify which victim is likely to be prone to develop severe and ongoing post-traumatic difficulties.

The reliability and validity of the AAI has been extensively explored (See van IJzendoorn, 1995) and its profound clinical uses have been reviewed (Steele & Steele, 2000). Much further research is needed to reveal which early experiences are carried over into later life, and what is most likely to be reworked, updated or otherwise changed as a function of later experiences.

Clearly, the language we use, the story we tell, and the meaning we derive from our lives must be open to revision across the life cycle. At the same time, there may be spontaneous modes of responding to the world, and automatic interpretations of emotional and social stimuli that remain with us as a consequence of earliest experiences.

#### Daycare and attachment

Whether, or for how long, children should be placed in daycare during the first year of life is one of the most hotly debated questions in the child and family literature, as well as in the public domain. In America, the National Institute of Child Health and Development (NICHD) spent millions investigating this question, in a large multi-site study in the US and an independent study in Israel. In both studies, across all sites, the quality of the infant-mother attachment at the end of the first year of life (as measured by the 'strange situation') was included as the core early outcome measure.

In the NICHD (1997) study, child care in and of itself was found neither to adversely affect nor to promote the security of infants' attachment to their mothers. However, certain childcare conditions, in combination with certain home environment correlates, did increase the probability that infants would be insecurely attached to their mothers. More specifically, infants who received either poor quality of care, more than 10 hours per week of daycare, or were in more than one childcare setting in the first 15 months of life, were more likely to be insecurely attached – but only if their mothers were very low in sensitivity (the bottom 25 per cent).

In the Israeli study, insecurity of attachment was shown to be a more likely outcome of daycare during the first year as compared with any other type of care, including stay-at-home mothers, paid help in the home, caregiving help from a relative (e.g. grandmother, aunt), or even childminding arrangements (Sagi *et al.*, in press).

The most probable explanation for these robust findings from America and Israel boils down to the ratio of caregivers to infants in the respective daycare settings, and corresponding differences in the quality of care available. Drawing on the extensive NICHD database, the longer-term consequences of early, extensive, and continuous non-maternal care have recently been reported by one member of the broad

NICHD research team. That this researcher chose to publicly highlight certain adverse social outcomes affecting some children (as opposed to the majority who fare well enough) led to a widely reported academic

'row' in the popular press. The findings themselves were not in dispute – it was the decision to disseminate them as the warning signal they are that aroused protest. But in my view, the value of evidence should not be based on how comfortable it makes us feel, but on the reliability and validity of the findings. After some 20 years of research on the effects of daycare, the most comprehensive study of the subject has revealed high levels of non-maternal care early in life to be linked to less harmonious parent–child relations, and elevated levels of child aggression and noncompliance in the early school years (Belsky, 2001).

## Conclusion

Given demands on both parents to earn an income, there is an urgent need to think laterally about ways of both improving the quality of daycare available to families, and empowering mothers and fathers to spend healthy ongoing periods of time with their infants. As John Bowlby never hesitated to mention, 'a society which values its children must cherish their parents'.

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## WEBLINKS

Attachment theory and research at Stony Brook:

<http://129.49.73.3/ewaters>

International Attachment Network:

[www.attachmentnetwork.org](http://www.attachmentnetwork.org)

Attachment and Human Development journal:

[www.tandf.co.uk/journals/titles/14616734.html](http://www.tandf.co.uk/journals/titles/14616734.html)

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