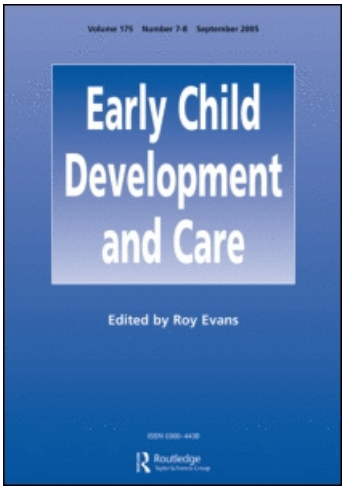

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Fathers in attachment theory and research: a review

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Fathers in attachment theory and research: a review

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This paper provides a brief history of attachment research on fathers as a backdrop against which the other contributions to this volume can be viewed. Empirical research on child–father attachment progressed in four phases and began before Bowlby in 1969 published the first volume of his attachment trilogy. During each phase a different set of questions emerged. Initially, researchers compared fathers to mothers as potential attachment figures. More recent studies emphasize the notion that mothers' and fathers' roles as attachment figures and their influences on child outcomes may be different and complementary. At the same time, calls for a family approach to attachment studies are increasing.

Keywords: father attachment; attachment hierarchy; intergenerational transmission; father attachment outcomes; mother–father comparisons

Introduction

In his first still tentative formulation of attachment theory, Bowlby (1958) made no mention of fathers as potential attachment figures. His primary aim was to "debunk" the notion held by his psychoanalytic colleagues that infants love their mothers because mothers provide oral gratification. Instead, taking his cue from the emerging ethological literature on parent–offspring bonds in birds and nonhuman primates, Bowlby proposed an evolutionary explanation of human infant–mother attachment. Attachment behaviour, he theorised, is adaptive because it "maintains a younger more vulnerable individual in more or less close proximity to another discriminated and stronger individual" (Bowlby, 1979, p. 129) who can provide protection when needed. Bowlby invented the term "monotropy" to designate infants' tendency to direct attachment behaviours to one specific individual (the mother or mothering person).

Bowlby's thinking about the role of fathers as attachment figures evolved over time in line with the publication of relevant research findings. Although considerably more attention in the attachment field has been given to mothers, interest in fathers emerged very early in the development of attachment theory. To provide a historical background for the articles in this special issue, I delineate what I see as four phases in father attachment research. Each phase was dominated by specific questions and was associated with changes in the conceptualisation of child–father attachment by Bowlby and others. Because of scant research on studies of father-attachment in different family structures and father-attachment in non-industrialised societies these important topics are not included in this review.

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Two related research questions were asked during Phase 1: "Can fathers serve as attachment figures, and if so, is fathers' role secondary or equal to mothers'?" The answer to the first question was a clear-cut yes, but the question on fathers' place in a hierarchy of attachment figures was not fully resolved. In Phase 2, research continued to focus on fathers' place in an attachment hierarchy, but towards the end of the phase this topic was left aside in favour of a new question that signalled the transition to Phase 3. Two questions dominated Phase 3: "What is the comparative quality (security) of an infant's attachment to mother and father?" The second question that dominated Phase 3 was: "Are intergenerational relationship qualities independently transmitted from father and mother to child?" Interest in intergenerational issues was precipitated by the development of representational assessments of attachment for parents and children. Initial findings from longitudinal research with both parents suggested that the quality of infant–mother and child–mother attachment had the greatest or even sole impact on children's subsequent socio-emotional development, but this view changed during the next phase of father attachment studies. In Phase 4, results from longitudinal investigations in the USA, Germany, Great Britain and Israel that had followed children's development from birth to adolescence and young adulthood caused researchers to ask more nuanced questions: "Are the developmental outcomes of father and mother attachment different, even if both relationships were secure in infancy and childhood?" and "Are the same assessments appropriate for the study of attachment to mother and father?" At the same time, there were calls for a family perspective on attachment relationships.

Phase 1

Findings from the first two empirical studies relevant to infant–father attachment became available while Bowlby was working on his second, more elaborated version of attachment theory (published in 1969). These studies were conducted by individuals who had been members of Bowlby's research team at the Tavistock Clinic in London during the 1950s. Both documented infants' attachments to family members other than the mother, and led Bowlby to rework his earlier definition of "monotropy".

The first study (Ainsworth, 1963, 1967) was based on naturalistic home observations of 26 mother–infant pairs in Uganda. Ainsworth carefully described the sequential emergence of *attachment behaviours* that infants around six months of age began to direct towards their mothers in preference to others (e.g. separation protest, retreating and clinging to mother when afraid, greeting mother after an absence, calming when held by mother, following mother when she left the room and using her as a base for exploration). Ainsworth found that differential mother-directed responses were fairly quickly followed by differential attachment behaviour towards a small number of other figures, including father, grandmother, co-wife, even sibling. Attachment to fathers seemed to be especially common, even in babies who did not see their fathers often. One of the 26 infants showed attachment behaviour exclusively to the father and three others were said to prefer the father as attachment figure over the mother. However, in most cases the mother was preferred, and this was especially striking when babies were tired, hungry or ill. At the same time, babies were likely to accept comforting from specific secondary figures if the mother was not present. Ainsworth summed up her findings with the following statement:

> It is clear that infants during their first year of life may establish several attachments and a complex set of interpersonal relations. Our stereotype of the infant developing an attachment to the mother and to the mother alone during the first year is not borne out

> by these observations, despite evidence that when the chips are down the attachment to the mother usually seems to be the focal one. (1967, p. 356)

The second relevant study was conducted by Schaffer and Emerson (1964) in Scotland. Their objective was to ascertain the onset and describe the further development of separation anxiety directed to specific "attachment objects" across infants' first year of life. Findings were based on monthly home interviews of 60 mothers, supplemented by informal observations. Whereas a majority of the Scottish mothers reported that their infants exhibited separation anxiety to them first, most of these infants soon adopted a small number of additional attachment objects. Using the intensity of separation protest (e.g. a "full-blooded" cry versus a whimper or a moan) as the criterion, Schaffer and Emerson identified the mother as the "principal attachment object" for 80% of the infants during the month when directed separation protest was first reported. However, by 18 months only half of the mothers were still characterised as infants' sole principal objects. In many of the remaining families, mothers and fathers were said to fill the "principal" role jointly. In 10 of the 60 families, the father was identified as 18-month-olds' sole principal object. As had also been the case in Uganda (Ainsworth, 1967), responsiveness rather than physical care or time spent with the infant seemed to guide the infants' choice of "principal object".

Bowlby reviewed these two studies in considerable detail in his 1969 volume (pp. 199–204, 306–308), and adopted Schaffer and Emerson's notion of an attachment hierarchy with mother at the apex. He retained the term monotropy (p. 209), but redefined it to denote infants' tendency to seek out a *principal* attachment figure (if present) in preference to a small number of *subsidiary* figures. At the same time, Bowlby seemed to discount Schaffer and Emerson's rankings of fathers and mothers as co-principal attachment figures in favour of Ainsworth's report that infant–mother attachment was the focal one in most cases. He contended that the two studies had failed to distinguish between fathers as preferred attachment figures and preferred playmates. Children seek playmates, he said (1969, p. 307), when they are in good spirits and know where their attachment figure can be found, but seek the attachment figure when they are tired, hungry, ill, alarmed or uncertain of the figure's whereabouts. Possibly, paternal playmates might have been miscounted as principal rather than subsidiary attachment figures, confounding the reported findings. In addition, Bowlby expressed reservations about Schaffer and Emerson's use of intense separation anxiety as a criterion for identifying the principal figure, because Ainsworth had discovered intense separation anxiety to be a hallmark of insecure infant–mother relationships in her Ganda study (see Bowlby, 1969, pp. 304–309).

Phase 2

Given the prominence Bowlby accorded to the Phase 1 studies in his 1969 reformulation of attachment theory, it is somewhat surprising that subsequent father-attachment research progressed only in fits and starts. One reason may be that the attention of developmental researchers was diverted by contentious findings obtained with the Strange Situation Procedure (SSP; Ainsworth & Wittig, 1969), a laboratory assessment of infant–mother attachment. The SSP consists of a 20-minute sequence of episodes during which one-year-olds encounter a stranger and experience two separations from and reunions with the mother. Patterns of 12-month-olds' attachment behaviour to the mother, especially during the two SSP reunions, turned out to be significantly correlated with prior ratings of mothers' observed sensitivity and responsiveness in

several caregiving contexts at home (e.g. crying, feeding, holding and face-to-face play) throughout infants' first year of life (Ainsworth, Bell, & Stayton, 1974; see also Ainsworth, Blehar, Waters, & Wall, 1978). Because these observations were conducted while fathers were at work, father–infant interactions were not assessed. Most of the mothers, as usual during the 1960s, were not employed outside the home.

The initial SSP findings led to an enormous upsurge of infant–mother attachment studies during the 1970s. Many of these had the goal of confirming or disconfirming the SSP's validity as a short-cut assessment of infant–mother attachment quality, but there were no immediate attempts to use the SSP to investigate the security of father attachment. Instead, a handful of researchers designed experimental laboratory procedures with multiple trials to compare infant attachment behaviour to mother, father and stranger (e.g. Cohen & Campos, 1974; Kotelchuck, 1972). The pace of father-attachment research quickened when Michael Lamb began a series of systematic studies to resolve issues raised by the attachment hierarchy hypothesis. In his first study, Lamb (1976) found that infants showed similar levels of approach and contact-seeking to mothers and fathers during a series of laboratory episodes in which either one or both parents were present, but fathers were the recipients of more affiliative behaviours (smiling, vocalising, proffering toys) than mothers. However, when a stranger joined the two parents, "there was a dramatic transformation of the infants' behaviour", as infants promptly shifted attachment and affiliative behaviour towards the mother (Lamb, 1976, p. 242). As in the two Phase 1 studies, stress heightened the visibility of mothers as principal attachment figures.

Next, Lamb (1977a) conducted unstructured home observations when infants were 7–13 months old. At four age-points, infants approached and sought physical contact equally from both parents, although mothers held infants more for caregiving routines and fathers held them more for play. As in the laboratory, infants directed more affiliative behaviour towards fathers. During a similar study with 15–24-month-olds, toddlers showed both more affiliative and more attachment behaviour to the father than the mother (Lamb, 1977b). In addition, boys were "in proximity of, approached, and fussed to, their fathers more than the girls while the latter were in proximity of, and fussed to, their mothers more than the boys" (p. 643). Finally, fathers were more active than mothers, particularly with their sons. Based on these findings, Lamb argued that father–infant and mother–infant relationships may involve different kinds of experiences for infants, resulting in differential influences on children's personality development from infancy onward. This topic was not broached again by other attachment researchers until Phase 4. Note that Lamb did not distinguish infants' approaches to a parent for play from approaches for comforting, hence the preference for the father during home observations may, in part, be due to his role as play figure. In his fourth study (1978), Lamb asked a new question that signalled the transition to Phase 3.

Phase 3

Rather than continuing to evaluate the relative frequency of infants' attachment and affiliative behaviour to mother and father under stress and non-stress conditions, Lamb decided to find out whether the secure, avoidant and ambivalent SSP patterns of mother–infant attachment that Ainsworth and Wittig (1969) had identified in the Baltimore study could be replicated with fathers. Whereas group comparisons revealed no mother–father difference in the distribution of the three SSP patterns at 12 months, many infants who were judged *insecure* with the mother were classified as

secure with the father and vice versa. This challenged Ainsworth's (1967, p. 356) assumption that insecure attachment to the mother might prevent an infant from developing attachments to other figures.

Main and Weston (1981) replicated Lamb's comparative SSP study with similar results. Finding no systematic match of infant–father with infant–mother SSP patterns, the authors concluded that the SSP assesses the quality of an infant's *distinct relationship* to each parent, not infant personality or temperament as some had proposed. Main and Weston also reported that infants with two secure SSPs responded most favourably to a stranger's friendly invitation to play ball (in the presence of the mother). Infants with two insecure SSPs responded least favourably while those with discordant (one secure, one insecure) SSPs received intermediate ratings. Taken singly, the classification with mother was a stronger predictor, however.

These findings induced Bowlby to add a sentence to the concluding chapter of the second edition of *Attachment* (1982), not present in the 1969 edition. It underscores the similarity of mothers' and fathers' function as attachment figures:

> A young child's experience of an encouraging, supportive, and cooperative mother, and a little later father, gives him a sense of worth, a belief in the helpfulness of others, and a favorable model on which to build future relationships … By enabling him to explore his environment with confidence, and to deal with it effectively, such experience also promotes his sense of competence. (Bowlby, 1982, p. 378)

In the mid-1980s, a new twist was added to the comparative study of mother- and father-attachment relationships as new measures of attachment at the representational level became available. Before reviewing these studies, I will interject a brief review of Bowlby's theorising about the role of representation in attachment relationships that had already been laid out in the second volume of his attachment trilogy, *Separation* (1973, p. 203). Here Bowlby postulated that a child builds representations (internal working models) of the physical and social world that allow him or her to make predictions and guide behaviour. These include working models of self and parents, derived from the experience of day-to-day interaction patterns. Such working models, Bowlby proposed, would influence the child's ability to form close relationships with others in the near and distant future:

> No variables, it is held, have more far-reaching effects on personality development than have a child's experiences within his family: for starting during the first months in his relationship with his mother-figure, and extending throughout the years of childhood and adolescence *in his relations with both parents* [italics mine], he builds up working models of how attachment figures are likely to behave towards him in any of a variety of situations; and on those models are based all his expectations, and therefore all his plans, for the rest of his life. (1973, p. 369)

Note that these remarks refer to the two parents as a unit and do not address conceptual problems that arose when it was later discovered that infant–parent SSP attachment patterns in many families were non-concordant, that is, secure with one parent but insecure with the other.

The pioneering study of attachment at the level of representation was longitudinal (Main, Kaplan, & Cassidy, 1985). In addition to infancy SSPs with each parent, it included the newly created Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985). The AAI consists of 20 open-ended questions that invite parents (independently) to reflect on remembered attachment relationships in their family of origin. After providing five adjectives to characterise the separate relationships with

their own mothers and fathers, interviewees are asked to recall specific episodes from childhood to support their choice of adjectives. Subsequent questions touch on what interviewees did when physically hurt, emotionally upset or ill, and on notable experiences of separation, rejection, threats, abuse and childhood traumas including loss. In the final section of the interview, parents are encouraged to talk about the effects that their childhood attachment relationships may have had on their adult personality and on the relationship with their own child or children. The questions were culled from issues discussed in the first two volumes of Bowlby's attachment trilogy (1969/1982 and 1973; George, personal communication, 2004).

Careful examination of both mothers' and fathers' AAI transcripts yielded four overall response patterns, and, as detailed below, these four patterns turned out to be meaningfully related to matching infant–mother and infant–father SSP classifications (Main et al., 1985; Main, 1995). AAIs were categorised as "secure-autonomous" when a mother's or father's narratives about family of origin attachments were reasonably coherent, emotionally open, reflective and valuing of attachment relationships. It was not necessary to describe a secure childhood to obtain this classification. Infants of secure-autonomous parents tended to be classified as securely attached to them in the SSP. AAIs were classified as "dismissing" if parents idealised their own parents' behaviours in general terms ("my dad was a saint"), but could not illustrate such global evaluations with specific recollections. These parents also tended to downplay or even derogate the importance of childhood attachment relationships for their personality development and current relationships. Their infants' SSP behaviour with them was typically classified as avoidant. AAIs were categorised as "preoccupied" when parents provided unreflective, vacillating and hard to follow accounts of conflicted childhood relationships with their own parents. Their infants tended to be identified as ambivalently attached to them in the SSP. Finally, some mothers and fathers whose AAIs were otherwise classified into one of the above categories exhibited a specific set of lapses while describing traumatic experiences (e.g. speaking as if giving a eulogy at a funeral when discussing the loss of a loved one rather than addressing the interviewer). Such interviews received the additional designation "unresolved/disorganised". Infants of these parents were more often than not classified as "disorganised" in the SSP.

SSP disorganisation was a new classification developed by Main and Solomon (1990) after they observed puzzling reunion behaviour such as transient trance-like states, freezing, shielding the face as if afraid, and stereotypic behaviour such as rocking back and forth. These behaviours did not fit the instructions for the three "organised" patterns developed by Ainsworth and Wittig (1969). Main and Hesse (1990) surmised that the intrusion of trauma-related thoughts while their children exhibited attachment behaviours might cause these parents to lapse into sudden frightening or frightened behaviour. The parents would thus seem dangerous or helpless at the very time when infants needed reassurance (for modest corroborative evidence, see Schuengel, van IJzendoorn, & Bakermans-Kranenburg, 1999). Note that unresolved AAIs and disorganised SPP classifications have since been observed to be very frequent in clinical samples (Bakermans-Kranenburg & van IJzendoorn, 2009).

Despite the fact that AAI questions pertain to an adult's childhood attachments, it is important to stress that AAI classifications are *not* assessments of these specific attachment relationships. For this reason, it would be wrong (as is often done) to call a person with a secure-autonomous AAI "securely attached." Instead, AAI classifications denote an individual's overall "state of mind with respect to attachment" which is regulated by classification-specific ways of processing *any* attachment-relevant

feelings, thoughts, speech and behaviours (Main, 1995). Therefore, Main proposes that a secure-autonomous "state of mind with respect to attachment" determines not only parents' ability to respond openly, reflectively and nondefensively to AAI questions but also to acknowledge and respond appropriately to their infant's attachment behaviours and signals. These parents can hence foster their own infants' security, irrespective of whether the remembered family of origin attachment relationships were secure or insecure (see Hesse, 2008, for explanations regarding insecure states of mind). Another term used in relation to the AAI ("internal working model") has very complex links to the state of mind construct that are frequently misunderstood (see Bretherton & Munholland, 2008, for an attempt to clarify this issue).

Very extensive training is required to become a reliable coder of the AAI, but this did not deter other researchers from undertaking intergenerational studies in which they compared maternal and paternal AAI assessments with the corresponding infant and toddler SSP classifications, as well as with observed parental sensitivity and other child outcome measures. Instead of discussing these studies individually, I summarise the results of a series of meta-analyses conducted by van IJzendoorn and colleagues (see Figure 1) to assess the strength of associations (joint effect size) of a group of similar studies. Figure 1 also displays the number of independent studies as well as the overall number of participants for each analysis.

Across studies, van IJzendoorn and De Wolff (1997) were able to confirm the same systematic match of mother and father AAIs with the corresponding SSPs that Main and colleagues had discovered earlier (1985; see also Main, 1995). These meta-analytic results held across studies, irrespective of whether the AAI had been administered shortly before the child's birth, concurrently with the SSP in infancy or several years later. Much more modest, though still statistically significant, were correlations emerging from the meta-analytic comparisons of mother and father SSPs with the matching parental sensitivity ratings based on observed interactions at home or separate laboratory

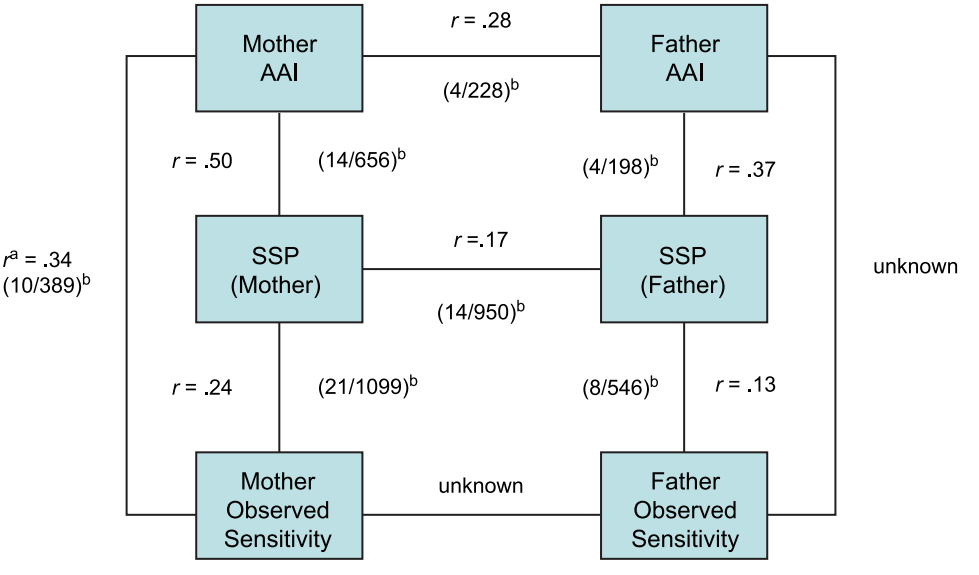

Figure 1. Meta-analyses of attachment studies. Source: van IJzendoorn (1995), De Wolff and van IJzendoorn (1997) and van IJzendoorn and DeWolff (1997).
[a]86% mothers, [b]first number in parentheses = number of samples, second = total participants.

sessions. This was unexpected because Ainsworth et al. (1974) had reported highly significant associations between maternal sensitivity at home and infant–mother SSPs at 12 months. Note, however, that no existing study has ever replicated the very lengthy and frequent naturalistic home observations that Ainsworth and colleagues undertook.

Overall, the separate sets of maternal and paternal meta-analyses reveal a similar direction of effects. Although weaker for fathers, all associations are highly significant. For unknown reasons, the AAI emerged as a better predictor of *observed* maternal sensitivity than infant–mother SSP evaluations (De Wolff & van IJzendoorn, 1997), but analogous findings of this link for fathers are unfortunately not yet available. The authors (p. 585) suggest that a multidimensional approach of parenting antecedents for both parents should replace the search for the unique contribution of sensitivity.

Turning now to meta-analyses examining associations between analogous mother- and father-related measures, a moderate concordance between paternal and maternal AAI classifications emerged when all available studies that included both parents were considered (van IJzendoorn & De Wolff, 1997). This finding was speculatively attributed to assortative mating. Surprisingly, the concordance of infant–mother and infant–father SSPs was much lower though still statistically significant. Of the 950 children for whom SSPs with father and mother were available, 428 (45%) were secure with both parents, 160 (17%) were insecure with both, but 362 (38%) were non-concordant, that is, secure with one parent and insecure with the other (van IJzendoorn & De Wolff, 1997).

The high percentage of non-concordant SSPs raised questions about the processes whereby distinct qualities in an infant's relationship with each parent affect personality development and sense of self in childhood (Bretherton, 1985). In his last theoretical volume (1988), Bowlby considered this issue for the first time:

> As yet too little is known about how the influence on personality development of interactions with the mother compares with those with the father. It would hardly be surprising were different facets of personality, manifest in different situations, to be influenced differently. In addition their respective influences on males may be expected to differ from that of their respective influence on females. It is clearly a complex area that will require much research. Meanwhile it seems likely that, at least during the early years of an individual's life, the model of self interacting with mother is the more influential of the two. This would hardly be surprising, since in every culture known, children interact far more with the mother than with the father. (p. 129)

In the first part of this statement Bowlby proposes complex hypotheses about possible effects of early attachment security that differ by gender of parent and gender of child. The second part (assuming greater longitudinal influence of the mother–infant relationship) is probably based on findings from the study by Main et al. (1985) which had unexpectedly shown that only the infant–mother, not the infant–father SSP classifications predicted children's responses to a representational assessment of attachment for children at age six, the Separation Anxiety Test (SAT). The SAT is a task during which children are shown six drawings or photographs depicting a child's separation from father and mother (Main et al., 1985; Main, Hesse, & Kaplan, 2005). The participant children were asked to describe how the pictured child would feel and what that child would do in each of the situations.

Phase 4

Initially, findings from several other longitudinal studies that included mothers and fathers pointed in the same direction as those reported by Main et al. (1985), but a

somewhat different picture emerged as children were followed into adolescence and young adulthood or, in one study, alternative infancy measures were employed.

van IJzendoorn, Sagi, and Lambermon (1992) had proposed four conceptual models to help make sense of the different ways in which multiple attachments to mothers, fathers, as well as professional caregivers might impact subsequent personality development: (1) the monotropy model (only the principal attachment figure has an impact on personality development); (2) the hierarchy model (attachment to the principal attachment figure, usually mother, is the best predictor; relationships with subsidiary attachment figures make "weaker" contributions); (3) the independence model (all attachment relationships are equally important, but each contributes to development in distinct domains); and (4) the integration model (the quality of all attachment relationships taken together predicts optimal outcomes). Note that these terms now denote the relative influence of maternal and paternal attachment *relationships* on a child's subsequent developmental outcomes rather than a child's differential *behaviour* towards attachment figures. Thus, the monotropy model refers to mother as the exclusive influence on personality development, not as an exclusive attachment figure.

All of the longitudinal studies reviewed below reported associations of infant–father attachment quality or father AAI classifications with child outcome measures, but the conceptual models that fit a particular study during one developmental period did not necessarily fit the same study (or another study) at other developmental periods. For example, in a longitudinal sample of Israeli children (Sagi-Schwartz & Aviezer, 2005) who had earlier participated in SSPs with mother, father and metapelet (i.e. the kibbutz child care provider), infant–mother and infant–father SSPs, taken singly, were unrelated to any socio-emotional outcomes at age five (van IJzendoorn et al., 1992). However, when considered together (i.e., one point for each secure SSP) the aggregated parental SSPs predicted teacher ratings of the child's ego-resiliency, goal-directedness and independence. When security with the metapelet in infancy was added, the correlations with teacher ratings of independence and goal-directedness increased, and those for empathy and dominance became significant. Beyond age five, on the other hand (at ages 11, 17 and 20 years), the infant–mother SSP predicted a considerably greater number of adaptive outcomes than the father SSP (e.g. various aspects of functioning at school, quality of parent–child discussion, self-perceived relationships with friends and peers and sense of coherence, a measure of inner strength developed by Antonovsky, 1997) than the infant–father SSP. Only at age 20 did two significant associations with the infant–father SSP emerge, the first with self-perceived quality of romantic relations and the second with global self-esteem. However, none of the numerous child measures beyond kindergarten correlated with the metapelet SSPs. Thus, the best-fitting model for the *earlier* Israeli findings is the integration model, whereas the attachment hierarchy model is more applicable to the *later* findings, with the proviso that the professional caregiver SSP no longer accounts for any variance.

In another longitudinal study, Steele, Steele, and Fonagy (1996) administered the AAI to mothers and fathers before the birth of their first child, and performed SSPs with both parents around one year of age. Even though mothers' and fathers' pre-birth AAIs were highly concordant with the corresponding infancy SSP classifications, significant longitudinal findings emerged primarily from the AAIs rather than the SSPs (Steele & Steele, 2005). Maternal (but not paternal) AAIs predicted six-year-olds' portrayal of authoritative (democratic) parental discipline in a story completion task and their understanding that people can have mixed emotions. At age 11, maternal AAIs predicted constructive resolution of pictured dilemmas. For girls only,

maternal AAIs also predicted the apparent truthfulness or credibility of answers given during an interview about self, family and friends. For boys, in contrast, interview truthfulness was correlated with *both* parents' AAI classifications. In addition, the paternal AAI was the sole predictor of the 11-year-olds' scores on a mental health screening tool and their interview accounts of constructively resolved conflicts with siblings and friends. In this study, the monotropy model fit best at age six, but at age 11 the independence and the integration models were more appropriate, given that some outcome measures were jointly predicted by both parental AAIs whereas others correlated with only one of the parental AAIs. In addition, some of the findings were specific to the gender of the child.

The most thorough longitudinal study that tested the predictive power of infant–mother and infant–father attachment quality was conducted in Bielefeld, Germany (summarised in Grossmann, Grossmann, & Kindler, 2005). This study, unlike the two reviewed above, included observational assessments and/or interviews with both parents up to age 16 as well as assessments of the children up to age 20. Two general results stand out. First, neither infant–mother nor infant–father SSP security was associated with later assessments. Instead, mothers' sensitivity during naturalistic home observations during the first year and fathers' sensitivity during challenging play with their 24-month-olds foretold several outcomes up to age 22.

Fathers' play sensitivity at age two (though not at age six) was an especially powerful predictor of several attachment- and personality-related child assessments at ages 6–10, 16, and at age 22 when it predicted the young adults' AAI security. Observed mother–infant sensitivity at home was related to the 6–10-year aggregated child measures, but correlations with later assessments were indirect. These findings do not fit any of the four models suggested by van IJzendoorn et al. (1992), because infancy assessments of maternal and paternal sensitivity in *different* contexts were associated with *similar* outcomes at 6–10 years and later. Using a technique called variance decomposition analysis (Amato, 1998), the authors were able to demonstrate that maternal and paternal sensitivity (measured differently) as well as ratings of mothers and fathers as supportive attachment figures at 6–10 years (similar measures) contributed significant joint, as well as significant unique, maternal and paternal variance to the prediction of their child's AAI security at age 22, although the relationship with the mother was by far the best predictor of the young adults' romantic relationships.

It is difficult to detect a common thread in the findings from these three longitudinal studies because each had somewhat different aims and used different outcome measures. However, all three studies documented theoretically plausible links of early father-related attachment measures to several offspring outcomes in adolescence and where available, young adulthood.

The strong findings by Grossman and colleagues demonstrate the value of continuing to assess various aspects of the mother–child and father–child attachment relationship well into adolescence. At the same time, their results refocused attention on Lamb's (1977b) earlier suggestion that father–infant and mother–infant relationships may involve different kinds of experiences for infants, and perhaps lead to somewhat different outcomes. Thus, rather than regarding fathers as less influential (e.g., perhaps as subsidiary figures in an attachment hierarchy), Grossmann et al. (2002) initially argued that fathers foster secure exploration while mothers foster secure attachment, fulfilling different but euqually influential roles. However, as they later acknowledged, the Bielefeld study was begun at a time when the roles of German parents were very distinct, with fathers serving as breadwinners and mothers raising

children. More recently, Grossmann, Grossmann, Kindler, and Zimmermann (2008) have emphasised that both parents can foster secure attachment and exploration, and thus provide psychological security for the child:

> Security of attachment involves tender loving care, comfort and consolation, and external help with emotion regulation … this security, however, does not suffice to create psychological security in children who must explore to gain knowledge and skills … [it] needs to be supplemented by the equally necessary security of exploration, based on sensitive support from both mother and father. (p. 874)

Note that this proposal links play to attachment theory in ways not explicitly entertained by Bowlby (1969/1982). Bowlby viewed an attachment figure as the secure base whom a child *leaves* to explore and to whom he or she *returns* as a haven of safety when alarmed or hurt. In contrast, support of, secure exploration as assessed in the Bielefeld study during father–child play involved more than sensitive support when the child requested it. As defined by Grossman et al. (2002), fostering secure exploration includes challenging the child to play in more mature ways, actively helping the child stay motivated, and taking the child's point of view when giving explanations and making suggestions (Grossmann et al., 2002).

Following these theoretical elaborations of attachment theory proposed by Grossmann et al. (2008), two new questions for father-attachment research suggest themselves: (1) "To what extent do fathers and mothers in different types of families play differentiated or equal roles in fostering secure attachment and secure exploration?" and (2) "taking into account secure attachment and secure exploration, What is fathers' versus mothers' unique and joint impact on the child's developing capacity for exploration and relatedness?"

Thoughts for the future

In order to answer the two questions posed above we need to refine the construct of secure exploration, not only as it applies to play but also to contexts beyond play. At the same time, I urge that we pay more attention to the quality of the interparental relationship. A small number of researchers have advocated a family systems approach to the study of attachment (e.g. Belsky & Fearon, 2004; Cowan, Cohn, Cowan, & Pearson, 1996). These researchers were able to show that assessments of marital satisfaction accounted for significant additional variance in the prediction of socio-emotional child outcomes, over and above that explained by parental sensitivity, SSPs and/or AAI classifications. These marital measures did not, however, include separate scales for *coparental* satisfaction and conflict.

I suggest that mothers' and fathers' parental collaboration or conflict depends not only on their spousal relationship, but on how they evaluate each other as parents. My thoughts on this topic emerged from a qualitative study in which mothers and fathers separately responded to a semi-structured interview about the relationship with their preschool child (Bretherton, Lambert, & Golby, 2005). Both parents in these families pursued careers and fathers were highly involved in many aspects of caregiving.

One of the questions asked during the interview pertained to similarities and differences in the mother– and father–child relationship, but without suggesting specific topics or issues. Given fathers' active caregiver role, accounts of similarities were expected to predominate in parents' answers, but although many parents began

by mentioning similarities the great majority continued by describing differences in how they and their spouse related to the child that raised new issues regarding attachment hierarchies and exploration not discussed in the previous literature.

Regarding attachment, about two thirds of the 49 fathers and mothers made comments such as: "in the middle of the night, if she needs someone it's mom." Some fathers regarded such preference for the mother as attachment figure as natural ("obviously there's some basic drive to get mom when in time of need") or attributed it to the mothers' more understanding and affectionate behaviour. These fathers appreciated the mother's caregiving and appeared to harbor no negative or jealous feelings. Similarly, some fathers who felt they lacked patience acknowledged the mother's greater sensitivity with appreciation or even admiration and tried to model themselves after her. Other fathers, in contrast, felt frustrated and hurt when children rejected their attempts to comfort them while the mother was present ("I find it hard when [child] will clearly say that, clearly show how she prefers mom" "everything is 'Mommy, Mommy, Mommy' … and I've taken care of her since she was just little"). Some of these fathers actually looked forward to times when they were alone with the child and were accepted as attachment figures.

A few mothers explained the child's attachment preference in terms of the fathers' lack of responsiveness (e.g., "If [child] is fussy, he thinks it's silly"), but others expressed empathy for fathers who felt left out (e.g., "… It's probably hard on Dad, and we try not to feed into that favoritism"). One mother had told the father that he could learn to provide security and taught him to "have the same things that I had out of the relationship." Mothers, but not fathers, emphasised that children's agency was partially responsible for the differentiated parental relationships because children insisted on the mother as attachment figure and the father as playmate. I should add that in the small minority of families in which the father was mentioned as the preferred attachment figure, mothers, too, expressed feelings of disappointment.

Regarding play and exploration, a number of fathers made remarks such as "I'm better at, when she's out exploring … I'll let her be more bold and try to, you know, kind of push her skills a little more." Moreover, when discussing joint activities during which the child wanted to try out emerging skills in potentially dangerous situations (e.g., climbing on rocks, jumping off high structures, using sharp tools), some fathers described their wives as overly cautious.

Several mothers appreciated the fact that the father was encouraging the child's physical prowess, noting that it complemented their role as attachment figures. Many said they were happy to leave roughhousing to fathers because they (the mothers) did not particularly enjoy it, although the children did. On the other hand, a small number of mothers worried that fathers' thresholds for letting children take risks were too low. Finally, many mothers described fathers as playful, wild and fun, whereas fathers more often talked of play and other joint activities, whether physical, quiet or educative as an opportunity for forging emotional bonds with their child.

Not only were many of the parents' remarks reminiscent of findings reported by Grossmann and colleagues (2002), but what struck us when analysing these descriptions is that parents did not necessarily interpret perceived differences in a negative light. Some admired their partners' distinct relationship "provisions" and/or viewed differences as beneficial in terms of parental complementarity. Hence, to answer the question "what is fathers' versus mothers' relative impact on the child's psychological security?" we need not only to chart how each parent separately fosters secure

attachment and secure exploration, but also to understand how a child's security is affected by the degree to which fathers and mothers do and do not value and support each others' parental contributions, whether similar or different.

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