

Coherence of mind in daughter caregivers of mothers with dementia: Links with their mothers' joy and relatedness on reunion in a strange situation

HOWARD STEELE,
EMILY PHIBBS, and ROBERT T. WOODS

ABSTRACT This paper reports on a small sample ($n=17$) of daughter caregivers of mothers with dementia who were interviewed with the Adult Attachment Interview, while their mothers stayed in an adjoining university room. Daughters were then reunited with their mothers, after a one-hour separation. Joyful and related 'secure' maternal behaviors, including proximity seeking, contact maintaining and overall responsiveness, were positively correlated with coherence of mind, and coherence of transcript ratings derived from the daughters' AAI. Controlling for the severity of dementia in the mothers did not alter the power of these associations. Discussion addresses the lifelong significance of reunion behavior, the survival of 'secure' attachment behavior even into the late stages of dementia, and the clinical relevance of the Adult Attachment Interview.

KEYWORDS: Alzheimer's disease – dementia – attachment behavior – Adult Attachment Interview (AAI) – Strange Situation

INTRODUCTION

Bowlby's (1973) assertion that attachment patterns are transmitted socially across generations has been robustly supported in relation to the caregiving of infants (van IJzendoorn, 1995), and older children (Main, Kaplan & Cassidy, 1985; Steele, Steele & Johansson, 2002). This paper considers if this paradigm may also apply to the increasingly common older life care-giving challenge presented by being in the situation of looking after an aging parent with dementia.

Attachment theory has been related to the situation of daughters caring for their elderly parents (e.g., Cicirelli, 1993). However, the relevance of intergenerational attachment research to dementia care has not been a focus of attention. In the dementia care research field, the characteristic romantic attachment style of the

Correspondence to: Howard Steele, Psychology Department, Graduate Faculty of Political and Social Science, New School University, 65 Fifth Avenue, New York, NY 10003, USA.

Email: SteeleH@newschool.edu

person with dementia has been shown to have clinical significance. Thus, it has been shown that when carers are asked to place the person with dementia's previous personality style within the attachment typology, the resulting groupings are predictive of behavioral disturbance in the person with dementia (Magai & Cohen, 1998). Insecure-avoidant patients showed more activity disturbance; insecure-ambivalent patients showed more depression and anxiety; and caregivers of securely attached patients showed less overall burden. These authors pointed out the need for similar research looking at attachment patterns of caregivers, who must cope with an emotional burden of challenging proportions.

A central feature to the burden on the caregiver is the confusion and emotional suffering so often evident in their family members with dementia. Moreover, the attention and support of the caregiver is often not what the person with dementia seeks. In dementia, the ensuing cognitive decline and accompanying emotional challenges lead many sufferers to frequently call for and seek out the presence of long deceased parents. Miesen (1992, 1993) called this phenomenon 'parent fixation' especially common in older people with dementia when alone and presumably overwhelmed with separation anxiety. Miesen drew a parallel to Ainsworth's classic developmental assessment tool (Ainsworth, Blehar, Waters & Wall, 1978), asserting that to be in the middle-to-advanced stages of dementia is universally one of being in a 'strange situation'. Despite the compelling relevance of this description, possible individual differences in the 'strange situation' behavior of people with dementia have not been systematically examined, nor has there been an attempt to link such differences to individual differences in caregivers' attachment patterns. It seemed probable, but had yet to be demonstrated, that the same caregiver characteristics associated with attachment security in children, namely the ability to provide a coherent account of one's attachment history (e.g., van IJzendoorn, 1995), would be linked to evidence of a secure attachment relationship between mothers with dementia, and their adult daughter caregivers. The current study aimed to examine this possibility by filming daughter caregivers and their mothers with dementia in an analogue of the strange situation, and also interviewing the daughters with the Adult Attachment Interview (AAI) (George, Kaplan & Main, 1985). We reasoned that a good test of this expected relationship would be to compare levels of coherence in daughters' interviews with the reunion behavior of the mothers following a lab-based separation.

Evaluating attachment patterns in daughter caregivers, the most common group of family carers after spouses, was considered carefully in the light of previous research. Cicirelli (1993) has utilized the attachment construct to study family carers but his operationalization of the construct was in terms of reported 'closeness', assessed via self-report questionnaire. This approach contrasts with the attachment constructs of metacognition and coherence (Main, 1991), rated by trained observers who study interview transcriptions, which have become defining features of the contemporary developmental approach in attachment research. While compared to self-report pencil-and-paper tools, interviews are more labor intensive and costly to administer, they permit – and sometimes demand – the respondent to tell their story, in their own words.

The paucity of AAI studies in the dementia care domain contrasts with the wide use of the AAI in developmental studies of care-giving provided to children (for a review see Hesse, 1999), and in an increasing number of clinical psychological and psychiatric studies (See Dozier, Chase Stovall & Albus, 1999; Slade, 1999; Steele &

Steele, 2003). Given the comprehensive profile of the interviewee's current state of mind regarding attachment, that the AAI coding system (Main, Goldwyn & Hesse, 2003) can deliver, this measure has the potential to be extremely useful in the context of understanding the relationship between a daughter caregiver and her mother with dementia.

The Adult Attachment Interview (George, Kaplan & Main, 1985) and the corresponding coding system (Main, Goldwyn & Hesse, 2003) provides an assessment of the extent to which an adult is emotionally balanced, coherent and valuing of relationships *whether or not* caregiving figures behaved sensitively and responsively during childhood. This interview has been tested in multiple socio-economic and linguistic contexts where it has been demonstrated to have remarkable statistical power for identifying parents who are coping well with the caregiving task (Steele et al., 2002; van IJzendoorn, 1995). The signal characteristic of autonomous-secure interviews is high levels of coherence, defined as fulfilling four maxims of conversational coherence, namely truth, economy, relation and manner (after Grice, 1975). Speakers whose interviews are classified as dismissing can be seen to violate the coherence maxim of truth, i.e. they fail to provide evidence for what they claim. These narratives also suffer from a failure to meet the maxim of economy in that the quantity of words is typically far less than is required by the conversational context, with many apparent blocks on attachment-related memories and a corresponding lack of emotional investment in the topic of attachment. The alternative insecure, preoccupied as opposed to dismissing, pattern of adult attachment is shown by those speakers who show an elevated awareness of childhood adversities, often accompanied by a high level of current anger toward a parent, or a marked difficulty in using language to specify the personal meaning of troubling attachment experiences. These interviews violate the coherence maxims of relation, economy and manner. These violations are seen in the way these speakers slip into the present when asked to talk about the past, saying more than is required by the context, and occasionally assuming a child-like dependent and passive voice.

Our aim in the current study was then to conduct an observation of older people with dementia upon reunion, in a 'strange situation' like observation, with their adult daughter caregivers, and to consider possible correlations between indices of joyful maternal reunion behavior and independently collected indices of security or coherence derived from Adult Attachment Interviews from the adult daughter caregivers. We hypothesized that greater evidence of coherence in the daughters' interviews would correlate with greater evidence of joyfulness in their mothers upon reunion. This would be so, we expected, because daughters unhindered by emotional conflicts stemming from their attachment histories would be more emotionally available to their declining mothers, and their mothers would reflect this state of affairs by showing joy and relatedness upon reunion. Conversely, we expected that low coherence in the daughters' interviews, stemming from ongoing emotional difficulties rooted in their past attachment histories, would be correlated with diminished levels of joy in their mothers upon reunion. Drawing on the compelling anecdotal evidence of emotional responsiveness and core selfhood, even if nonverbal, surviving into the latest stages of dementia (e.g., Kitwood, 1997a,b), we further anticipated that the intergenerational results we expected would hold, even after taking into account the severity of dementia in the mother.

METHOD

Procedure

In order to examine the intergenerational hypothesis, reunion behavior between older mother and daughter caregiver was video-filmed following a separation typically lasting approximately 45 minutes. During this time, the daughter was being administered the AAI, and the mother stayed with a female researcher who engaged her in conversation loosely structured around family memories. Ideally, we would have wished to administer the AAI to the mothers but their interests and capacities were best suited to this free-ranging discussion of family relationships. We assume this may have served to activate feelings and thoughts about attachment, just as the AAI was doing for the daughters. Thus, at the moment of reunion, each partner's attachment system was arguably 'activated'.

Sample

Seventeen adult daughter and mother pairs who took part in the study had complete records of the daughter's AAI, the filmed reunion, and the mother's severity of dementia rating. The age of the daughters ranged from 31 to 63 years ($mean = 48.8$, $SD = 7.2$). The mothers in the study were all diagnosed as having a dementia, varying in severity from mild to severe. The age of the mothers ranged from 70 to 90 years ($mean = 81.3$, $SD = 5.4$). In all cases, the daughter was the primary carer of the mother. The sample was recruited from two London areas through advertising in local newspapers and through contact with day-centres or nursing homes. Participation in the study was voluntary and the participants knew that the study was about attachment and caregiving in daughters and their mothers with dementia.

Measures

Clinical Dementia Rating (Hughes et al. 1982) Both to assure ourselves that the older people in the study all had dementia, and to control in our results for the possible influence of level of dementia, daughters' reports and available medical records were studied to establish severity of dementia in the older person. We used the Clinical Dementia Rating which consists of five categories referring to the severity of the disturbance where each category rests along a continuum from healthy functioning to severe dementia. Thus, the categories are: Healthy, Questionable Dementia, Mild Dementia, Moderate Dementia, and Severe Dementia. Into which category the person with dementia is assigned depends on his or her reported function in six areas (memory, orientation, judgment and problem solving, community affairs, home and hobbies, and personal care). For the current sample of 17 mothers, seven were scored as having Mild, six Moderate, and four Severe Dementia.

The Adult Attachment Interview (AAI: George et al. 1985; Main, Goldwyn & Hesse, 2003) The Adult Attachment Interview is a semi-structured, hour-long interview with 15 open-ended questions related to the issues of attachment, separation and loss in childhood and adulthood. In this study an additional seven questions regarding the daughter's feelings about caring for her mother were added. We rated the transcribed

interviews in terms of current state of mind regarding attachment (as indicated above), before assigning a single classification (secure, dismissing, preoccupied or unresolved concerning past loss or trauma) after Main et al. (2003). The first author rated and classified the interviews, which were also checked independently by another rater (M. Steele) trained to high levels of reliability in the use of the AAI manual. Inter-correlations for the rating scales were high (median $r = .83$, range = $.70 - .91$), and there was 100% agreement on four-way classifications. Autonomous-secure classifications were assigned to three (17%) of the AAIs, insecure-dismissing classifications to seven (39%), insecure-preoccupied classifications to four (22%), while three of the interviews (17%) were assigned to the group designated unresolved regarding past loss or trauma. Of this latter unresolved group, two interviews were otherwise considered preoccupied, and one otherwise considered dismissing.

Given the small sample, and paucity of autonomous-secure classifications, close attention was given to nine-point interval-ratings of the daughters' current state of mind regarding attachment in terms of five scales thought to be most relevant to the study, i.e. coherence of transcript, coherence of mind, reflective functioning, and unresolved mourning concerning (i) past loss and (ii) past trauma. The distribution of these AAI rating scale scores is shown in Table 1 below. Though not part of the Main et al. approach to scoring AAIs, 'reflective functioning' (Fonagy, Target, Steele & Steele, 1998) is a close correlate of coherence.

The Reunion Coding Scheme The Reunion Coding Scheme developed and applied in the current work was inspired by the central consideration given to reunion behavior in the Strange Situation (Ainsworth, Blehar, Waters & Wall, 1978). For the more vulnerable member of the pair, being left alone in an unfamiliar room is reliably presumed to activate the attachment system (e.g., Spangler & Grossmann, 1993), causing mild to moderate distress, and the resulting ease with which the dependent person seeks out contact with the caregiver, and returns to a balanced – often joyful – emotional state, is taken as a sign of a secure attachment relationship. Upon reunion, the camera was focused on the mother's behavior, and the coding scheme later applied to the films consisted of five positive dimensions of response thought to indicate pleasure and trust in the relationship to the daughter caregiver upon reunion. These were:

Table 1 Summary of AAI state of mind scale ratings for daughters' interviews, and reunion behavior of their mothers

	<i>Mean (SD)</i>	<i>Range</i>
<i>Daughters' AAIs</i>		
Coherence of transcript	3.5 (1.2)	1–6
Coherence of mind	3.3 (1.4)	1–6
Reflective functioning	2.4 (1.2)	1–5
Unresolved loss	2.8 (2.4)	0–7
Unresolved abuse	1.5 (2.5)	0–6
<i>Mothers' reunion behavior</i>		
Facial expression	2.5 (0.7)	2–4
Proximity seeking	2.4 (0.7)	2–4
Contact maintaining	1.7 (0.7)	1–3
Overall responsiveness	2.9 (0.8)	2–4
Overall attunement	2.6 (0.6)	2–4

- (1) *Positive Facial Expressions* The mother is happy to see the daughter. She not only notices her return, but she is enthused by it, and this is evident on the mother's face. The mother is smiling and bright-eyed.
- (2) *Proximity Seeking* The mother makes an effort to gain physical contact with the daughter, either by looking toward, reaching, or actually moving toward the daughter in an obvious wish to achieve contact. Moving one's body toward the daughter is not required for a high score – the focus here is upon an obvious intent on the mother's part to achieve contact.
- (3) *Contact-maintaining behavior* The mother makes one or more obvious attempts to maintain contact, once gained. She may hold on once having achieved contact, or otherwise show, at least once in the reunion, a deliberate wish to remain in physical contact.
- (4) *Responsiveness* Mother's body language indicates interest and attention towards the daughter. This may take the form of leaning towards, following the gaze of, or intently listening to, the daughter.
- (5) *Overall emotional attunement (mother and daughter)* Here the focus is upon the mother–daughter pair, and the extent of shared emotional expression, evidence of ability to anticipate communication, evidence of mirroring, frequency of eye contact and overall affectionate involvement with each other.

Each of the five dimensions was rated on a four-point scale (i.e., not apparent, not very apparent, apparent and very apparent). Two research students, blind to other information about the mother or daughter, independently rated the reunions. Their levels of agreement with one another were good (median $r = .85$, range $.82 - .88$). Their ratings were averaged to compute a set of five reunion behavior scores. These are summarised in Table 1, along side the average agreed scores for the Adult Attachment Interview ratings obtained from the daughters.

Table 1 reveals that the ratings scales assigned to the daughters' AAIs and the mothers' behavior upon reunion were normatively distributed, with a wide range of scale points being used. Notably, the mean scores for coherence and reflective functioning are relatively low, an indication of the remarkably low frequency of autonomous-secure interviews.

Intra-correlations among the Reunion Coding Scheme scores were very high, suggesting a unidimensional result from our scoring of maternal reunion behavior (median $r = .73$, range $= .65 - .88$). On this evidence, we computed a Cronbach' alpha and the result further confirmed the internal consistency of the five scales, $\alpha = .93$. We therefore summed the scales to create a composite measure of maternal joy and relatedness upon reunion. Notably, the correlation between the severity of mothers' dementia and their joy and relatedness upon reunion was positive and non-significant, $r = .21$, $p < .41$.

RESULTS

Given the small sample size, and preponderance of insecure AAI responses from the daughters, correlations were relied upon in order to gain an estimate of the strength of the association between the daughters' states of mind about attachment and their mothers' reunion behavior. Zero-order and partial correlations (controlling for the

possible influence of severity of dementia) between the AAI coherence scores derived from the daughters' interviews and the observed level of joy and relatedness in the mother upon reunion are shown below in Table 2.

Table 2 points to a considerable and significant level of overlap between daughters' levels of coherence when discussing their attachment history and their mothers' behavior upon reunion. The more coherent the daughter was in the AAI, the more likely the mother was to score highly on the cumulative index of joy and relatedness upon reunion. The estimated shared variance between these daughter and mother attachment variables is over 40%, with the severity of the mothers' dementia being unrelated to whether they were joyful or not upon reunion. The latter is evident in the absence of a significant difference between the zero order and partial correlations where daughters' coherence and mothers' reunion behavior is concerned.

Notably, Table 2 also indicates negative correlations between unresolved mourning in the daughter, regarding past loss and trauma, and joy and relatedness upon reunion by the mother. The magnitude of these partial correlations is somewhat higher than the zero order correlations ($-.45$ compared with $-.35$). This suggests that unresolved grief in a daughter makes it much less likely that a mother with dementia will respond positively upon reunion, even if their advanced stage of dementia has perhaps led them to feel acutely distressed by the separation, and prone to seek out the daughter upon reunion. Given the small sample, these correlations narrowly miss significance but are highly suggestive.

The correlations shown in Table 2 were computed a number of times without the daughters' interviews judged unresolved or autonomous-secure in order to identify whether one group of interviews, e.g., the unresolved ones or the autonomous-secure ones, were uniquely responsible for the magnitude and significance of the correlations shown in Table 2. Interestingly, while the small sample size shrank to 14 when the secure interviews were removed, and to 11 when the unresolved and secure interviews were removed, the overall direction and magnitude of the correlations did not change. In other words, daughters whose interviews were *more* organized and believable with respect to childhood experiences, and *more* emotionally balanced and valuing of attachment – regardless of whether the interview was judged insecure overall, – had mothers who responded toward them with greater joy and interest. And, if interviews attracted higher scores for

Table 2 Zero order and partial correlations between AAI ratings of daughters' interviews and observed levels of joy and relatedness upon reunion in their mothers, controlling for severity of dementia

Daughters' AAIs	Extent of joy and relatedness of the mothers	
	Zero order	(Partial)
Coherence of transcript	.60*	(.65**)
Coherence of mind	.66**	(.69**)
Reflective functioning	.39	(.41)
Unresolved loss	-.37	(-.46)
Unresolved abuse	-.33	(-.45)

Note: For a sample size of 17, a correlation coefficient is significant at the $p < .05$ (2-tailed level) when it is equal to or exceeds $\pm .48$, indicating above by *, whereas ** = $p < .01$.

unresolved mourning, even if the interview did not score high enough to be judged unresolved, there was a tendency for the mothers with dementia to be less responsive, less likely to show a wish to maintain contact, and overall the mother–daughter pair seemed less well attuned.

As mentioned previously, mothers' severity of dementia did not relate significantly to their reunion behavior. In other words, there were some very animated and positive emotional responses upon reunion, even from some of those mothers with severe dementia.

DISCUSSION

The attachment research reported here extends the applications of standardized developmental research tools (the Strange Situation and the Adult Attachment Interview) to a new and important domain, both demographically and clinically, specifically the emotional needs of older people with dementia and their family carers. The results demonstrate that individual differences in adult daughters' abilities to provide a coherent account of their attachment histories relate systematically to individual differences in their mothers' responsiveness upon reunion following a 45 minute separation. In particular, daughters with impoverished levels of coherence, or heightened levels of unresolved mourning, had mothers who were significantly less joyful and less related upon reunion. Furthermore, this intergenerational association was unrelated to the severity of dementia in the mother. These results have a number of implications for the field of dementia care. Discussion below takes as the initial focus the mothers with dementia, and then the links observed between their emotional responsiveness and their daughters' state of mind about attachment, and finally upon how the current attachment findings may be used to enhance our understanding, and ultimately promote, the relationship quality between these close family members.

The mothers with dementia in our study represented the full range of severity, from mild to severe symptoms as communicated to us by their daughters. Through the daughters, we sought corroborating evidence from medical reports, and thorough questioning about all aspects of home life. Though only a small sample, they are in terms of severity representative of the more than 18 million people worldwide with dementia, two-thirds of these in the developed world (including nearly 1 million in the UK, and 4 million in the USA), with estimates of 34 million worldwide by the year 2025; 1 in 100 people over 65 are afflicted, and 1 in 20 over age 80 (Corrada, Brookmeyer & Kawas, 1995).

Most importantly, the severity of their dementia in our sample was not found to be associated with their joyful facial expressiveness, proximity seeking, contact maintaining, overall responsiveness, and overall attunement with their daughters on reunion in the modified strange situation. In other words, some women who were very advanced in the disease process were nonetheless very responsive to their daughters. This highlights the need to appreciate how a core sense of self, capable of responding socially and emotionally to a preferred other, survives into the very late stages of the disease, if not until the end itself. This observation is consistent with neurobiological evidence and speculation on areas of preservation within the brain-function of the person with dementia. It may be that what survives longest are certain core features of what was encoded and stored earliest, namely one's earliest internal

working model of attachment arguably established in the right orbital frontal cortex (see Schore, 2000). Certainly, appreciation for the social and emotional self within the person with dementia is growing (e.g., Kitwood, 1997a; Sabat, 2001), and there is evidence of such attachment-informed knowledge positively influencing clinical interventions, social policy and practice concerning the needs of people with dementia and their carers (Miesen, 2002).

The work reported here revealed that only some of the mothers with dementia showed an animated social response to their daughters after a one-hour separation. Furthermore, those who did appear to recognize, maintain contact with, and be positively attuned to their daughters were more likely to have daughters who shared a certain type of attachment profile, evident in their Adult Attachment Interviews. This profile included significantly higher levels of coherence, both of transcript and mind, and less evidence of difficulties with unresolved mourning concerning past loss or trauma. That is to say, if a daughter was able to appear emotionally and cognitively organized in discussing their attachment history, providing a narrative judged to be the product of a coherent mind, then the mother upon reunion was significantly more joyful, related and responsive. The results also provide some indications that daughters who were more resolved regarding past loss or trauma, and who demonstrated higher evidence of reflective functioning, also contributed positively to the likelihood of their mothers showing trusting, animated interest, and joy upon reunion. The correlations for these associations with resolution and reflection, however, were not sufficiently high to be statistically significant. This is probably due to the lower, and more restricted range, of scores given to the daughters' interviews on the scales indexing resolution of loss or trauma, and reflective functioning.

The results, it could be argued, reflect *only* the currently felt greater comfort and ease evident in some, as opposed to other, relationships between mothers with dementia and their daughters. In this light, mothers with dementia who have access to greater joy and relatedness may be positively influencing their daughters, and helping them to achieve or maintain greater coherence of mind and transcript when discussing their attachment history.

For daughters, there are obvious advantages for themselves and their mothers, if they notice and respond well to the capacity for joy and relatedness in their mothers with dementia. Participating in such positive interactions, for the daughters, may be helped along and maintained by the ability to tell the story of their attachment history in a way that meets the conversational requirements of coherence, i.e. having evidence for what one says, saying neither too much nor too little, staying 'on task' and remaining relevant, and being well mannered. The ability to speak about loss or trauma in a way that locates these painful events in the past, permitting oneself to focus upon the present, seems of obvious help to the self and others who depend on you. Extrapolating from what we know about the unresolved AAI response in mothers of children (e.g., Hesse & Main, 1999; Lyons-Ruth, Yellin, Melnick & Atwood, 2003), it may be rather fearful and inhibiting for the mother with dementia when she is with her daughter who is beset with unresolved feelings concerning past loss or trauma.

A caveat is in order with respect to the very low frequency of autonomous–secure interviews we observed among the daughters. Further research is needed to explore whether the uneven distribution of AAI classifications, heavily skewed toward insecurity, is typical of the wider population of daughter or indeed son carers. It has been previously reported that the likelihood of insecure attachments and unresolved

loss experiences does increase with age and life experience (Magai, 2001), but the very high level of insecurity in the present sample suggests something about the self-selection process on which we relied for recruitment. Perhaps it was adult daughter carers with a pronounced attachment-related difficulty who were most interested in our appeal for volunteers given the opportunity we provided for consultation with a clinical health psychology unit. That we nonetheless found a range of meaningful differences in attachment-related coherence that was linked to maternal behavior upon reunion is remarkable.

The life-long significance of reunion behavior following a separation from a loved one, on whom we feel dependent, is underscored by these findings. Inhibited responses upon reunion by the older person with dementia may be seen in this context as an indication of 'excess disability' (Reifler & Larson, 1990) reflecting a malignant pattern of relating to the daughter such that the mother with dementia is appearing more disabled than the extent of any brain pathology would indicate ought to be the case. This is consistent with the views expressed in Clare & Woods (2001) on how rehabilitation efforts with people with dementia should include as a central aim the reduction of excess disability, taking into consideration the family interactions of the person with dementia. The current work points to the immense value of attachment theory and research methods in further understanding and supporting people with dementia, and those they depend on for care.

ACKNOWLEDGEMENTS

The research reported here was supported by a project grant from the Economic and Social Research Council (ESRC) United Kingdom, R000 222 772. We are grateful to Christine Larsen for her scoring of the reunion data, to Lisa Whitehouse for her help with the collection of AAI data, and to the daughter caregivers and their mothers who volunteered their time and attention. We are also grateful to Carol Magai for taking the lead in suggesting this special issue, her editorial guidance and the comments of an anonymous reviewer.

REFERENCES

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. N. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Bowlby, J. (1973). *Attachment and Loss* (Vol. 2): *Separation, Anxiety and Anger*. New York: Basic Books.
- Cicirelli, V. (1993). Attachment and obligation as daughters' motives for caregiving behaviour and subsequent effect on subjective burden. *Psychology and Aging*, 8, 144–155.
- Clare, L. & Woods, R. T. (Eds) (2001). *Cognitive rehabilitation in dementia*. Hove: Psychology Press.
- Corrada, M., Brookmeyer, R., & Kawas, C. (1995). Sources of variability in prevalence rates of Alzheimer's disease. *International Journal of Epidemiology*, 24, 1000–1005.
- Dozier, M., Chase Stovall, K. C., & Albus, K. E. (1999). Attachment and psychopathology in adulthood. In J. Cassidy & P. Shaver (Eds), *Handbook of Attachment*, pp. 497–519. London: The Guilford Press.
- Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). *Reflective functioning manual for application to Adult Attachment Interviews (Version No. 5.0)*. Unpublished manuscript, Psychoanalysis Unit, University College London.

- George, C., Kaplan, N., & Main, M. (1985). *The Adult Attachment Interview*. Unpublished document. Department of Psychology, University of California, Berkeley.
- Grice, H. (1975). Logic and conversation. In P. Cole and J. Moran (Eds) *Syntax and Semantics III: Speech Acts* (pp. 41–58). New York, Academic Press.
- Hesse, E. (1999). The Adult Attachment Interview: historical and current perspectives. In J. Cassidy & P. Shaver (Eds) *Handbook of attachment: theory, research and clinical applications* (pp. 395–432). New York & London: Guilford Press.
- Hesse, E. & Main, M. (1999). Second generation effects of unresolved trauma in non-maltreating parents: Dissociated, frightening, and threatening parental behavior. *Psychoanalytic Inquiry*, 19, 481–540.
- Hughes, C. P., Berg, L., Danziger, W. L., Coben, L. A., & Martin, R. L. (1982). A new clinical scale for the staging of dementia. *British Journal of Psychiatry*, 140, 566–572.
- Kitwood, T. (1997a). *Dementia Reconsidered*. Buckingham: Open University Press.
- Kitwood, T. (1997b). The concept of personhood and its relevance for a new culture of dementia care. In B. Miesen and G. Jones (Eds), *Care-giving in dementia: Research and applications, Volume 2* (pp. 3–13). London: Routledge.
- Lyons-Ruth, K., Yellin, C., Melnick, S., & Atwood, G. (2003). Childhood experiences of trauma and loss have different relations to maternal unresolved and Hostile-Helpless states of mind on the AAI. *Attachment and Human Development*, 5, 330–352.
- Magai, C. (2001). Emotions over the lifespan. In J. Birren & K. W. Schaie (Eds) *Handbook of the Psychology of Aging*, (pp. 399–426). San Diego: Academic Press.
- Magai, C. & Cohen, C. I. (1998). Attachment style and emotion regulation in dementia patients and their relation to caregiver burden. *Journal of Gerontology*, 53, 147–154.
- Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) models of attachment: Findings and directions for future research. In C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds), *Attachment Across the Life Cycle* (pp. 127–159). London: Routledge.
- Main, M., Goldwyn, R., & Hesse, E. (2003). Adult attachment scoring and classification systems (Version no. 7.2). Unpublished manuscript. Department of Psychology, University of California, Berkeley, CA.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds), *Growing points of attachment theory and research. Monographs of the Society for Research in Child Development*, 50, 66–104.
- Miesen, B. M. L. (1992). Attachment theory and dementia. In G. Jones & B. M. L. Miesen (Eds), *Care-giving in Dementia* (pp. 38–56). London: Routledge.
- Miesen, B. M. L. (1993). Alzheimer's disease, the phenomenon of parent fixation and Bowlby's attachment theory. *International Journal of Geriatric Psychiatry*, 8, 147–153.
- Miesen, B. (2002). The Alzheimer Cafe. In: G. Jones & B. M. L. Miesen (Eds) *Care-giving in Dementia. Research and Applications*, Vol III. New York/London: Routledge/Brunner, 2002.
- Reifler, B. V., & Larson, E. (1990). Excess disability in dementia of the Alzheimer's type. In E. Light & B. D. Lebowitz (Eds), *Alzheimer's Disease Treatment and Family Stress*. New York: Hemisphere.
- Sabat, S. (2001). *The experience of Alzheimer's Disease*. Oxford: Blackwell.
- Schore, A. (2000). Attachment and the regulation of the right brain. *Attachment and Human Development*, 2, 23–47.
- Slade, A. (1999). Attachment theory and research: Implications for the theory and practice of individual psychotherapy with adults. In J. Cassidy & P. Shaver (Eds), *Handbook of Attachment* (pp. 575–594). London: The Guilford Press.
- Spangler, G. & Grossmann, K. E. (1993). Biobehavioral organization in securely and insecurely attached infants. *Child Development*, 64, 1439–1450.

- Steele, H. & Steele, M. (2003). Clinical uses of the Adult Attachment Interview. In M. Marrone & M. Cortina (Eds). *Attachment theory and the psychoanalytic process* (pp. 107–126). London: Whurr Publishers.
- Steele, M., Steele, H., & Johansson, M. (2002). Maternal Predictors of children's social cognition: An Attachment Perspective. *Journal of Child Psychology and Psychiatry*, 43, 189–198.
- van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, 117, 382–403.