Attachment Theory and Mentalizing

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Introduction

Attachment theory was pioneered by the British psychiatrist and psychoanalyst John Bowlby. Its fundamental tenet is that in order for an infant's healthy emotional development to take place, they need to have a secure relationship with at least one primary attachment figure – a consistently present and emotionally available caregiver. Bowlby was medically and psychoanalytically trained, but he was significantly informed and inspired by evolutionary thinking and ethology. It was this integration of an evolutionary and biological approach with a psychoanalytic one that has made Bowlby's work both so powerful, and at times controversial. He described attachment as a universal, evolved process, that infants are innately programmed to form attachments. The attachment created between the infant and carer early in life not only provides the basis for physical protection and care, it also meets the infant's essential emotional needs, allowing him or her to acquire the capacity for mentalizing (the imaginative interpretation of others' and one's own mental state), and for the infant's sense of self-agency. As attachment work has developed, many of its findings have proved congruent with our growing neurobiological understanding of the brain, as well as new thinking on how young children learn, both about the world at large and about their own inner, emotional world. As such, attachment is increasingly understood as providing both the neurological and the psychological framework for the development of personality.

Despite John Bowlby's psychoanalytic background, his biological and apparently mechanistic approach to the ways in which early experience and early relationships shape an individual's emotional life caused opposition and eventual schism from the mainstream psychoanalytic world. Over the last thirty years, attachment theory has developed considerably, and its relationship with psychoanalytic thinking has changed too; it has a growing and increasingly sophisticated theoretical and experimental hinterland and an extensive research base, with systemised forms of measurement. As attachment research has produced a compelling and coherent body of findings, it has been increasingly accepted that attachment patterns in infancy fundamentally affect adult relationships and ways of relating. This understanding has had fruitful bearing on the way we examine enduring difficulties that an individual may manifest in the ways that they relate in others, most notably in the field of personality disorder. What is more, in the last decade or so, the gap between psychoanalysis and attachment thinking has become conspicuously smaller. This rapprochement has been

further helped by the growth of the concept of mentalizing, which combines psychoanalytic thinking, attachment theory and recent research on social-cognitive development to shed light on the human impulse and capacity to understand and imagine one's own and other people's thoughts. The creatively interdisciplinary quality which has always characterised attachment theory – its relationship with ethology and evolutionary thinking, cognitive development, and its stormy but undeniable connection with psychoanalysis – has been maintained and developed in recent years through its relationship with the latest neuroscientific work. Across this chapter, we will set out the major principles of attachment theory and the key developments in its intellectual history, as well as discussing criticism of attachment theory and its relationship with psychoanalysis, and the most current innovations in attachment theory and mentalizing.

History

John Bowlby, who was born in London in 1907, trained as a psychiatrist and a psychoanalyst. In his early twenties, between finishing his undergraduate degree at Cambridge and beginning his medical training, he worked as a teacher; most significant for him were the six months he spent at a progressive school for maladjusted children, Priory Gate. He said later of this experience, '… when I was there I learned everything that I have known; it was the most valuable six months of my life, really' (Kraemer et al., 2007). It was through the children that Bowlby met here that he first started to make his observations about the intense importance of the relationship between child and mother, and the effects that deprivation in maternal care can have on children, both in terms of their immediate distress and their long-term behaviour and mental health. It was this fascination with how and why the mother-figure (or primary caregiver as we would now describe it) matters so much that shaped Bowlby's life's work.

On his return to London for his medical training, Bowlby, partly influenced by his experiences at Priory Gate, began his psychoanalytic training. His continuing work with deprived and delinquent children in the 1930s and 1940s led to his being commissioned by the World Health Organization to write a report on the effects of institutionalization on young children. *Maternal Care and Mental Health* was published in 1951 and laid out Bowlby's thinking on maternal deprivation, presenting evidence for how 'when deprived of maternal care, the child's development is almost always retarded – physically, intellectually and socially – and that symptoms of physical and mental illness may appear' (Bowlby, 1951, p.

15). He cited – in a fascinating precursor to the seminal research on attachment in Romanian orphanages in the 1990s – studies of rates of babbling and crying in babies in orphanages, which demonstrated that institutionalised infants were, by the age of 2 months, measurably less vocal than their counterparts in families.

In 1946, Bowlby became Deputy Director of the Tavistock Clinic in London, and Director of its Children's department, which, he renamed the Department for Children and Parents (Bretherton, 1992). It was his perspective on the significance of the infant's maternal environment that first opened a rift with psychoanalytic thinking. Although Bowlby had trained as psychoanalyst in the tradition of Melanie Klein (his training analyst was Joan Riviere, an influential Kleinian theorist, and his later analytical supervisor was Melanie Klein herself), Bowlby's put increasing emphasis on the effect of a child's emotional environment – in contrast to the Kleinian emphasis on the child's internal phantasies as a driver of psychic development, or the Freudian emphasis on the infant's desire for its mother being driven by the sensuous seeking of oral gratification.

The impact of separation from a primary attachment figure became an early focal point for attachment thinking – famously depicted in the film *A Two-Year-Old Goes to Hospital*, an account of the devastating impact of parental separation for a young child. Made by the psychoanalyst and social worker James Robertson, it is a painfully forensic depiction of the toddler's distress and descent into despairing listlessness across an eight-day hospital stay without her mother. The film had so much resonance partly because the effects of separation had hitherto been so little considered in social care and medical practice. The dominance of secondary drive theory – which posited that an infant's desire for proximity with its primary caregiver was driven by their association with providing food and physical care – led to the conclusion that as long as the infant received consistent sustenance and physical protection elsewhere, they would be able to adapt smoothly to changing circumstances. Although contentiously received (some psychoanalysts pointed out, for example, that the child's mother was pregnant, and that the child's desperation may have derived from her feelings about this), the film paved the way for a rethinking of the way hospitalization and institutionalization should be managed for young children. The film, which was very basically and naturalistically shot, showed the visceral reality of attachment needs, as a primitive and defining prerequisite for emotional health in infancy.

Across the 1950s, Bowlby's thinking further evolved away from a psychoanalytic approach through the influence of animal behaviourists, such as Konrad Lorenz and Robert Hinde. Lorenz's work on imprinting in geese and other birds – showing how a young animal,

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at the right developmental window, is susceptible to learning behavioural traits from its parent – resonated with Bowlby's fascination with teasing out all the wider implications of the infant-caregiver relationship. Particularly relevant was Lorenz's observation that young geese would follow – become attached to – parents, or even objects, even though they did not feed them, if they were exposed to these objects at the right developmental moment (hence the famous black and white film footage of a lanky Lorenz trotting round a garden being followed by a small flock of eager goslings). Similarly, Harry Harlow's experiment with infant rhesus monkeys observed that when distressed the monkeys sought comfort not from their metallic, mechanically feeding 'mother' but from the inert but soft, clothed object also placed in their cage. These findings were significant as a riposte to the commonly held view that a young baby's interest in his or her mother was primarily motivated by the need for food (cupboard love as the shorthand had it) or the seeking of pleasurable sensation which becomes associated with the mother's presence. Partly bolstered by ethological findings, Bowlby concluded that the infant's drive to be close to its mother was a biological need in itself, not a secondary drive arising from other physical desires. Bowlby took an evolutionary perspective on a child's emotional and cognitive developmental imperatives, as well as its most basic physical needs. Through his on-going, mutually enriching, intellectual collaboration with the influential Cambridge ethologist Robert Hinde, Bowlby widened the idea of the biological and evolutionary perspective on infancy to encompass the developmental requirement for emotional closeness and psychic support.

Bowlby developed his thinking on attachment substantially across the 1950s, presenting three important papers to the British Psychoanalytic Society which laid the basis for attachment theory (Bretherton, 1992). His first paper was 'The Nature of the Child's Tie to his Mother' (Bowlby, 1958), followed by 'Separation Anxiety' (Bowlby, 1959) and 'Grief and Mourning in Infancy and Early Childhood' (Bowlby, 1960). Published at a period when the two main opposing schools of British psychoanalytic thinking, Melanie Klein's grouping and the more classically Freudian grouping (under the leadership of Freud's daughter Anna Freud), were divided over theoretical differences about the intellectual legacy of Sigmund Freud, Bowlby simultaneously enraged both factions with his rejection of the physical, sensuous nature of the infant's desire for maternal contact. The initial paper was Bowlby's first major presentation of his belief that psychoanalysts under-appreciated the significance of the infant-mother tie in early life. Although this initial sally was conducted with a certain well-mannered whiggishness – Bowlby appealed to Freud's movement towards a greater appreciation of the centrality of the emotional nuances of this early relationship towards the

end of his life – the results were nevertheless explosive in psychoanalytic circles; for once the Freudians and Kleinians were united in dismay at Bowlby's intellectual heresy.

All the same, Bowlby remained a lifelong member of the British Psychoanalytic Society, and he also maintained that 'a great number of the central concepts of my schema are to be found plainly stated in Freud' (Kraemer et al., 2007, p.305). Looking at Bowlby's work now, we can see that one of his great contributions was his creative integration of the work of the two great thinkers who preceded him, Freud and Darwin (Bowlby's final work was a biography of Charles Darwin). The question of Freud's intellectual legacy was, in the 1950s however, a hotly contentious and divisive enough issue within mainstream psychoanalysis; Bowlby's rather maverick appropriation of Freudian thinking was beyond the pale.

Bowlby substantially expanded and enriched his theory in the trilogy of books, *Attachment* (Bowlby, 1969), *Separation* (Bowlby, 1973) and *Loss* (Bowlby, 1980). Across these three texts, Bowlby set out his full elaboration of attachment theory, starting with the evolutionary basis for attachment using ethological as well as human examples. Attachment was described as a form of behaviour which the infant adapts according to environmental stimuli. Attachment behaviours are actions which infants use to bring about proximity with the caregiver (these can be crying, smiling, vocalising, or as the infant becomes mobile, physically approaching and following the caregiver). Taken together, such actions constitute a behavioural system – in other words, an inherently motivated, evolutionarily driven set of behaviours. The innate quality of the need for attachment is indicated by the fact that infants still attach to mothers who maltreat or neglect them, a notion harder to square with secondary drive theory. As a biological driven need, almost all infants form an attachment, but in response to the signals supplied by the attachment figure, the infant develops their own pattern of relating, or attachment style.

The ultimate function of the attachment system is evolutionary, but its repercussions are subtle and wide-ranging. The signals and quality of the exchanges provided by the attachment figure forge internal working models (IWMs) – expectations and perceptions of the self and of others – which persistently shape the tenor of emotional/social interactions:

> 'In the working model of the world that anyone builds a key feature is his notion of who his attachment figures are, where they may be found, and how they may be expected to respond. Similarly, in the working model of the self that anyone builds a key feature is his notion of how acceptable or unacceptable he is in the eyes of his attachment figures.' *Separation* (Bowlby, 1973, p.203)

Bowlby more fully elucidated the concept of the IWM across the last two volumes of his trilogy, *Separation* and *Loss*. He described the IWM as the mechanism via which attachment was transmitted across the generations. A care-giver who acquired a stable, healthy IWM through their own experiences in childhood can help the infants for whom they care to build their own IWM which is autonomous, self-protective and able to relate to others. Through the working model, Bowlby conceptualized a more complex and subtle model for the psyche than is sometime recognized in more simplistic depictions of attachment theory. The mental representations that a person constructs, through their IWMs, particularly in relation to themselves and attachment figures, are central to how they expect others to behave, and how they might be predicted to respond to other people's behaviour. In *Loss*, Bowlby described how experiences – often involving other people's emotional states or attachment needs – that are not compatible with the IWM are defended against and disregarded. This led to a new exploration – through the attachment model – of repression and dissociative phenomena, which most typically occur with the deactivation of the attachment system in a disorganised individual dealing with grief.

Key developments: The Strange Situation and the Adult Attachment Interview

Bowlby's work on attachment was substantially developed, empirically and theoretically, by the work of the Canadian developmental psychologist, Mary Ainsworth (1913-1990). Ainsworth worked for a time with Bowlby at the Tavistock in the early 1950s before performing observational studies of maternal-infant interaction while based in Kampala, Uganda and in Baltimore in the United States. Ainsworth's close observation of maternal patterns of behaviour towards and interactions with their children showed significant individual differences. In the Baltimore study in particular, Ainsworth undertook a beautifully observant and meticulous study of the ways in which maternal styles and maternal sensitivity in the early months of life correlated with smoother and more harmonious interactions at around 12 months (Bretherton, 1992).

In the 1970s, Ainsworth and colleagues developed the Strange Situation protocol, which was designed to assess attachment behaviour in infants in a standardised way. The Strange Situation takes a vignette from the drama of a toddler's everyday life– exploring new toys, meeting strangers and seeking reassurance from caregivers – and formalises it into a compellingly revealing account of the infant-caregiver dyad. During this procedure, which takes about 20 minutes from start to finish, a mother and infant are introduced into an unfamiliar playroom. To start with the mother and child are left alone and the child is free to

explore; the mother is asked to watch and quietly engage, but not lead this exploration and play. A stranger (usually a woman) then enters the room, exchanges a few words with the mother before approaching the infant, at which point the mother discreetly exits, leaving the infant with the stranger, who interacts with the child and seeks to encourage play. The parent then returns, and is reunited with and comforts the infant, at which point the stranger slips out. Having reassured the infant, the parent then leaves the room, leaving the infant altogether on its own. At this point the stranger returns and attempts to engage with the child (who by this point is often rather upset and bewildered). Finally the parent returns to the room and comforts the child and the stranger again discreetly leaves.

From their first experiences of the Strange Situation, Ainsworth and her colleagues were particularly struck by the differences in the ways that infants responded to their mothers when they were reunited. Most of the infants were quickly and easily comforted, despite often having been quite distressed moments before, whereas others would express anger or frustration with the mother, or they would allow the mother to comfort them, but would not tolerate a full embrace. Others still would appear disinterested, even cold-shoulder their mother on their return. As this work went on, it became increasingly apparent that infants were consistently displaying particular behaviours, or styles of behaviour, in response to particular parenting styles.

These different styles of response to the Strange Situation were categorised into three patterns: secure; avoidant; and, resistant or ambivalent. Further work by Mary Main and colleagues at Berkeley in the 1980s revealed a fourth pattern, disorganized attachment. According to these patterns, a securely attached infant (who normally constitute approximately the two-third majority of a non-clinical population) quickly starts to play in the primary caregiver's presence, is tentative around the stranger, and is upset and often tearful at their caregiver's absence. They may accept a degree of comfort from the stranger, but show a clear preference for their caregiver, and are easily comforted by their care-giver on their return. A securely attached child firmly expects their distress to be met with comfort and reassurance.

An avoidant infant appears unconcerned at their carer's disappearance, may not seek contact with the caregiver on their return, and may not seem to prefer the caregiver to the stranger. An avoidant individual has adapted to less responsive caregiving by deactivating their attachment system, learning not to use attachment behaviours to solicit comfort and

obtain proximity from their carer, instead seeking to manage alone. A resistant infant tends to keep their focus on their caregiver rather than immersing him or herself in exploration and play when they are first introduced to the playroom; seems highly distressed by the separation; and is not easily comforted on being reunited with the carer. Resistant attachment involves the hyperactivation of attachment behaviours; the infants tend to display high levels of vigilance towards possible attachment threats, and seek reassurance in a particularly urgent manner. A disoriented/disorganized infant is so-called because of their unusual attachment behaviour, which seems to suggest a breakdown, freezing or disorientation when faced with their own attachment needs. This may manifest itself in apparently chaotic or surprising behaviours such as becoming very still; stereotypical actions such as head banging; or simply appearing frightened of the parent.

Building on this work with infants, further studies were undertaken in the 1980s to see how different attachments styles and behaviours are shown by adults. Attachment styles were found to be relatively enduring across life, with significant implications for thinking about the role of attachment in personality development. Attachment in adults was first rendered measurable when Mary Main, Carol George and Nancy Kaplan produced the Adult Attachment Interview (AAI) in 1984. The AAI is a semi-structured interview which asks subjects to describe their childhood experiences that relate to attachment, and to consider how these experiences might affect their relationships and their functioning as adults.

Corresponding with the classifications for infancy, adult attachment styles are categorized as secure/autonomous, avoidant/dismissing, anxious/preoccupied and unresolved/disorganized. An adult who is secure/autonomous during the AAI coherently integrates attachment memories into a meaningful narrative and shows appreciation for the importance of attachment relationships. Avoidant/dismissing AAI narratives will be less coherent: patients will be unable to recall specific memories in support of general arguments and will idealize or devalue their early relationships. Anxious/preoccupied adults will also show a lack of coherence, and will express confusion, anger, or fear in relation to early attachment figures. Unresolved/disorganized adult's narratives, particularly on the subject of bereavements or childhood traumas, will contain lapses in reasoning or expression, such as non sequiturs, and exaggerated, unnecessary detail, or changes in register and uncharacteristic grammatical mistakes. The unresolved state has been described as a temporary breakdown of attention when distracted by traumatic memories, whether during the AAI or through

interacting with an infant. Adults showing this pattern are also classified within one of the three primary categories.

The persistent quality of attachment styles produces similarly enduring strategies for dealing with emotions and social contact. For example, the increased sense of agency of the secure child permits him/her to move toward the ownership of inner experience, and towards an understanding of self and others as intentional beings whose behaviour is organized by reasonably predictable mental states, thoughts, feelings, beliefs and desires. Longitudinal research indicates that securely attached children are rated as more resilient, self-reliant, socially oriented, and empathic to distress, and tend to have higher self-esteem. Securely attached individuals are able to invest trust in their attachment figures and do not overestimate environmental threat; they can respond proportionately to emotional and social challenges.

Dismissing individuals may have a higher tolerance for experiencing negative emotions, while preoccupied individuals are likely to have a lower threshold for perceiving environmental threat and, therefore, stress. This is likely to contribute to frequent activation of the attachment system, with the concomitant distress and anger such activation can cause likely to manifest as compulsive care-seeking and over-dependency. Unresolved/disorganized individuals – the adult analogue of disorganized/disoriented infants – frequently have parents who are themselves abusive or unresolved regarding their own losses or abuse experiences.

Evidence linking attachment in infancy with more general personality characteristics is stronger in some studies than in others. Findings from the Minnesota Study cohort indicate a correlation between infantile attachment insecurity and adult measures of psychiatric morbidity, with many potential confounding factors controlled for, linking insecurity and adversity to indications of personality disorder (Carlson et al., 2009). However, in contrast to Bowlby's prediction, the avoidant and resistant classifications tend not to be strongly related to later measures of maladaptation. The disorganized/disoriented infant category appears to be most strongly associated with psychological disturbance (Fearon, 2010), although there is also some evidence to suggest a connection between avoidance and internalizing conditions (depression and anxiety) (Groh et al., 2012).

Criticisms of Attachment Theory

There has been a history of extensive criticism of attachment theory from within the field of psychoanalysis. The common theme of these critiques has been that by requiring theoretical constructs to be measurable and by focusing on observable behaviour rather than on drives and unconscious fantasy, attachment theory drastically reduces the explanatory power of psychoanalytic observations and misses the point of its theory. The definitive review of the first volume of *Attachment* by George Engel in the *International Journal of Psychoanalysis* was remorselessly negative: 'despite Bowlby's inexact treatment of psychoanalytic theory and the logical fallacies that follow, and his misapplication of general systems theory, this is still an important book for psychoanalysts… Unfortunately Bowlby fails as an expositor leaving the reader the task of identifying what has germinal value for psychoanalysis' (Engel, 1971, p.193). The psychoanalyst Gregory Rochlin was even more despairing: 'The enormous difficulties encountered in attempting to understand the nature of a child's earliest relationships, especially with his mother, are never better illustrated than by Bowlby's efforts…. His recent turning to studies of primates and control systems in the hope that this will be a more rewarding direction may content him but it will disappoint his reader. Bowlby can convince only if one grants his broad suppositions, is willing to overlook the important distinctions between infants and young primates, and accepts the notion that circuitry between living organisms and robots have little to distinguish them' (Rochlin, 1971, p. 506).

As mentioned above, recent trends have reduced the gulf between attachment and psychoanalysis. One of these is that the psychoanalytic world has become increasingly tolerant of heterogeneity. Another factor in this shift has been that the impact of the environment, especially the consequences of trauma, have been increasingly embraced by psychoanalytic thinking. The emergence of a relational and relationship-focused emphasis in modern psychoanalysis in recent decades has particularly resulted in an increasing interest in the formative nature of the child's social environment. This relational orientation has inexorably moved psychoanalysts closer to an attachment model, both theoretically and in their clinical approach.

Concern with child's actual environment was driven by an increasing interest in infant development as a legitimate way of explaining differences in adult behaviour. For example, according to objects relation theory, as described by the British psychoanalyst Ronald Fairbairn, people are fundamentally driven by relationships and their need for them; the

pursuit of relationships is not a secondary by-product of the primary drives for gratification described by Freud. Consequently, an infant's psyche is shaped by its early relationship experiences. There are clear congruencies here, then, with attachment theory. As the object relations model has emerged as the dominant psychoanalytic paradigm, attachment theory's emphasis on the innate need for a relationship has been regarded as increasingly viable. Also important has been the emergence of neuroscientific data from both animal and human work, which has shown the profound impact of early experience on brain development and on social and emotional development. This has served to strengthen the common interests of psychoanalysts and attachment theorists in infant-parent relationships and the role of early experiences in the emergence of emotion regulation.

Nevertheless, psychoanalytic reservations have remained. Attachment theory's continuing neglect of sexuality in general and infantile sexuality in particular, for example, has been raised (Zamanian, 2011), and there are ongoing concerns about the erosion of the unique complexity and humanism of the psychoanalytic project in the face of the research-driven focus of attachment studies (Hoffman, 2009). Such critiques highlight a real and fundamental disparity in approach between attachment theory and psychoanalysis: the sense that the paradigm-driven schematic constraints of attachment research have resulted in the loss of clinical subtlety and the wealth of psychological complexity allowed for by psychoanalysis. However, it would be an impoverished understanding of attachment theory to portray it as unconcerned with 'the dynamic unconscious.' Bowlby's own later thinking on unconscious defences against memories of traumatic separation and loss, for example, and the work of other attachment theorists on the defences that unconsciously structure the developing personality and capacities for relating, are testament to this. The major difference between Bowlby's thinking and Freud's was in Bowlby's perception of the human emotional need for others as innate, universal, and evolutionarily driven. Freud, on the other hand, saw the specificities and complexities behind the impulses involved in relationships, allowing for an exploration of the mind which more readily allows for the difficult and contradictory nature of human subjectivity.

The use of well-established and easily replicable assessment measures such as the Strange Situation protocol and the Adult Attachment Interview has perhaps served to fade out some of the subtleties and nuances of Bowlby's thinking. Inge Bretherton's work on IWMs, for example, has shown attachment theory did seek to engage with internal, symbolic processes: the IWM was described as a representation of the self in metaphorical

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conversation with the other (Bretherton and Munholland, 1999). The internal, psychic power of the IWM as expressed by Bowlby was also partly disguised by his antipathy towards the psychoanalytic tendency to focus on internal fantasy at the expense of real-life experience. Bowlby's emphasis on how early environmental experiences mould the IWM, does not in fact detract from the richness and imaginative complexity of the IWM that each child devises from their experiences. As the value of attachment thinking has become well-established, empirically, clinically and theoretically, the future of attachment thinking and research seems to suggest a further refinement of some of the established thinking and to seek locate attachment's role in a wider story about the formation of subjectivity and selfhood, driven by the imperatives of genes and environment – in particular how the social world around us teaches us to mentalize, and the level of epistemic trust we learn to invest in our closest relationships (to which we will return in the next section).

Attachment theory has also received feminist criticism. Attachment is in itself not gender specific, in that the primary attachment figure can be male or female, and it need not be a genetic relation. However, the emphasis on maternal deprivation and the conflation of the mother with the normal primary attachment figure, drove a critique of attachment thinking which saw it as a means of defining, and limiting, women according to their reproductive roles. In particular, the emphasis on the possible consequences of being deprived of maternal contact was interpreted as a challenge to the need and desire of women to work out of the home environment. In fact, as early as Bowlby's 1951 WHO report, Bowlby was clear that the primary attachment figure was not necessarily the mother herself: 'the infant and young child should experience a warm, intimate, and continuous relationship with this mother (or permanent mother substitute) in which both find satisfaction and enjoyment' (Bowlby, 1951, p. 11).

In the context of Western domestic norms at the time when attachment theory was being developed, it was perhaps inevitable that the biological mother was constantly referred to as the primary attachment figure. The historian Marga Vicedo, in her recent work on the history of attachment theory, has located the power of attachment in the United States in the 1950s within a hardening of attitudes towards gender roles in a context of rising numbers of married women in the workplace, anxiety about increasing levels of divorce and juvenile delinquency, and an intellectual environment where women and female identity were being increasingly contested (Vicedo, 2011). She points out that Bowlby's bestselling book, *Child Care and the Growth of Love* (Bowlby, 1953) (based on his WHO report *Maternal Care and*

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Mental Health), was published in 1953, the same year that, for example, Alfred Kinsey's groundbreaking book on female sexuality, *Sexual Behaviour in the Human Female* was first published, and Simon de Beauvoir's *The Second Sex* was first translated into English (Vicedo, 2011, pp.410-411). Vicedo argues that Bowlby's work put exceptionally strong emotional pressure on women as mothers, and reinforced the moral dimension and responsibilities of appropriate maternal love by formulating it as a biological imperative (Vicedo, 2013).

Attachment theory is not a static monolith, captured in the stultifying aspic of post-war cultural preoccupations: aspects of its have been refined, others jettisoned as research has progressed and continues to progress. In the following section we look forward to future directions in attachment thinking.

New Developments: mentalizing, attachment and epistemic trust

A relatively recent concept, mentalizing, has been of some significance in integrating psychoanalytic thinking with attachment theory and research. Mentalizing – defined as the impulse to seek to understand, to imagine other people's thoughts – is one of humanity's most pervasive and powerful characteristics. The first minds that small children are presented with, to wonder about and interpret, are of course those of their most intimate family. Close family – primarily the major attachment figures – provide the earliest formative lessons in other people's thinking, and also, through these people's reactions, for learning about how our thoughts are perceived: who we are imagined to be by others. The mentalizing model is concerned with the caregiver's understanding and reflection on the infant's internal world; through the lessons in reflection and self-reflection that are part and parcel of child-caregiver interaction, mentalizing claims a vital relationship between attachment processes and the growth of the child's capacity to understand interpersonal behaviour in terms of mental states (Fonagy et al., 2002).

The theory of mentalizing grew out of developmental research into the growth of understanding of mental states in the self and other. The mentalizing model was first outlined in the context of a large empirical study in which security of infant attachment with each parent proved to be strongly predicted not only by that parents' security of attachment during the pregnancy (Fonagy et al., 1991), but even more by the parents' capacity to understand their own childhood relationships with their own parents in terms of states of mind. The capacity to mentalize is a key determinant of self-organization and affect regulation, and it

emerges in the context of early attachment relationships. Mental disorders in general can be seen as the mind misinterpreting its own experience of itself and therefore of others. The concept of mentalizing postulates that one's understanding of others depends on whether one's own mental states were adequately understood by caring, attentive, non-threatening adults. Problems in affect regulation, attentional control, and self-control stemming from dysfunctional attachment relationships are mediated through a failure to develop a robust mentalizing capacity (Bateman and Fonagy, 2010).

Mentalizing enables a child to distinguish inner from outer reality, construct representations of his or her own mental states from perceptible cues (arousal, behaviour, context) and infer and attribute others' mental states from subtle behavioural and contextual cues. The full development of mentalizing depends on interaction with more mature and sensitive minds. Many studies support the suggestion that secure children are better than insecure children at mentalizing (measured as passing theory of mind tasks earlier) (see, e.g., de Rosnay and Harris, 2002). Children with secure attachment relationships assessed by the Separation Anxiety Test do better than children with disorganized attachment on a test of emotion understanding. The first of these findings, reported from the London Parent–Child Project (Fonagy et al., 1997), found that 82% of children who were secure with the mother in the Strange Situation passed Harris' Belief-Desire-Reasoning Task (which measures an individual's ability to predict someone else's behaviour based on an understanding of their beliefs and desires) at 5.5 years, compared with 50% of those who were avoidant and 33% of the small number who were preoccupied. Findings along these lines are not always consistent, but it generally seems that secure attachment and mentalizing are subject to similar social influences.

The caregiver's capacity for insightfulness and reflective function appears to be associated with both secure attachment and mentalizing. Meins (2001), Oppenheim (2002), and Slade (Slade et al., 2005) have sought to link parental mentalizing with the development of affect regulation and secure attachment by analyzing interactional narratives between parents and children. Although Meins assessed parents' quality of narrative about their children in real time (while the parents were playing with their children) while Oppenheim's group did this in a more 'offline' manner (parents narrating a videotaped interaction), both concluded that maternal mentalizing was a more powerful predictor of attachment security than, say, global sensitivity. Meins and colleagues found that mind-related comments by caregivers at 6 months predicted attachment security at 12 months (Meins et al., 2001),

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mentalizing capacity at 45 and 48 months (Meins et al., 2002), and performance in a stream of consciousness task at 55 months (Meins et al., 2003). Oppenheim et al. found that a secure caregiver–child relationship was predicted by high levels of mentalizing about the child's behaviour.

Slade and colleagues (Slade et al., 2005) also observed a strong association between infant attachment and the quality of the parent's mentalizing about the child. Rather than using an episode of observed interaction, Slade and her colleagues used an autobiographical memory-based interview about the child, the Parent Development Interview (PDI). High scorers on the PDI's mentalizing scale are aware of the characteristics of their infant's mental functioning, and they grasp the complex interplay between their own mental states and the child's putative inner experience. They are likely to have secure relationships with infants whom they describe in a mentalizing way. Low mentalizing mothers were more likely to show atypical maternal behaviour on the AMBIANCE (Atypical Maternal Behavior Instrument for Assessment and Classification) system, which relates not only to infant attachment disorganization but also to unresolved (disorganized) attachment status in the mother's AAI (Grienenberger et al., 2005).

Taken together, these results suggest that a mentalizing style of parenting might well facilitate the development of mentalizing in the child. Consistent with this is a range of findings covering aspects of parenting that have been shown to predict performance on theory of mind tasks. The process of acquiring mentalizing is so ordinary and normal that it may be more correct to consider secure attachment as removing obstacles to it, rather than actively and directly facilitating its development. Coherent family discourse characteristic of secure attachment helps to generate explanatory schemata by means of which the behaviour of others can be understood and predicted. It is fair to say that, under normal circumstances, conversations with frequent accurate elaboration of psychological themes may be the 'royal road' to understanding minds. Main's (2000) groundbreaking work has linked attachment to this kind of communication with words. The key to understanding the interaction of attachment with the development of mentalizing may be to look at instances where normally available catalysts for mentalizing are absent.

Maltreatment disorganizes the attachment system. There is also evidence to suggest that, by impeding or distorting open reflective communication between parent and child, maltreatment may disrupt mentalizing. Young maltreated children display certain

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characteristics indicative of impaired mentalizing: they engage in less symbolic and dyadic play; they sometimes fail to show empathy when witnessing distress in other children; they have poor affect regulation; they make fewer references to their internal states; and, they struggle to understand emotional expressions, particularly facial ones. Maltreated children tend to misattribute anger and show elevated event-related potentials to angry faces (for a comprehensive review, see, Cicchetti and Toth, 2005).

Maltreatment may disrupt the development of a coherent understanding of the connection between internal states and actions in attachment relationships (e.g., the child may be told that they 'deserve', 'want', or even 'enjoy' the abuse). This is liable to be more damaging if the maltreatment is perpetrated by a family member. Even when this is not the case, parents' ignorance of maltreatment taking place outside the home may invalidate the child's communications with the parents about his/her feelings. The child finds that reflective discourse does not correspond to these feelings, a consistent misunderstanding that could reduce the child's ability to understand/mentalize verbal explanations of other people's actions. In such circumstances, the child is likely to struggle to detect mental states behind actions, and will tend to see these actions as inevitable rather than intended. This formulation implies that treatments should aim to engage maltreated children in causally coherent psychological discourse.

Disturbance of attachment relationships, by inhibiting the capacity for mentalizing, disrupts key social-cognitive capacities (the ability to conceive mental states as explanations for behaviour in oneself and in others) and thus creates profound vulnerabilities in the context of social relationships. Difficulties in mentalizing appear to be the developmental mechanism for the connection between attachment problems and the enduring difficulties in relating to others which characterize personality disorders. Missing out on early attachment experience (as was the case for the Romanian orphans) creates a long-term vulnerability from which the child may never recover – the capacity for mentalizing is never fully established, leaving the child vulnerable to later trauma and unable to cope fully with attachment relationships (e.g., Rutter and O'Connor, 2004). More importantly, by activating attachment, trauma will often decouple the capacity for mentalizing. This, of course, is further exacerbated when the trauma is attachment trauma. The capacity for mentalizing in the context of attachment is likely to be in certain respects independent of the capacity to mentalize about interpersonal experiences outside the attachment context. For example, in a quasi-longitudinal study based on interviews and chart reviews with young adults, some of whom had suffered trauma, we

found that the trauma affected mentalizing in attachment contexts (in this case, adult romantic relationships), but mentalizing was not adversely affected when measured independently of the attachment context (using the Reading the Mind in the Eyes test, which measures how well an adult can judge mood from a photo of their eye area; it is used as a measure of empathy and general capacity to mentalize) (Fonagy et al., 2003). It seems that measuring mentalizing in the context of attachment might measure a unique aspect of social behaviour.

Insecure and unpredictable attachment relationships between parent and infant may create an adverse social environment that limits the infant's opportunity to acquire 'mind-reading'. But why should evolution allow for such variation if mentalizing is such a valuable adaptive capacity? In social environments where resources are limited, non-mentalizing might be adaptive. The parent's lack of mirroring behaviour may serve as a signal for limited resources, warning the child that they will need to use physical force (even interpersonal violence) to survive. Violence is incompatible with mentalizing: if violence rather than collaboration is required to survive, and violence is possible only when we avoid contemplating the mental state of the victim, then the child's lack of mentalizing capacity may increase his/her chances of survival. By contrast, in resource-rich environments, adult carer-teachers are in a better position to facilitate the child's access to subjectivity. If parent–child interaction lacks marking, contingency, and other ostensive cues, mentalizing will be less firmly established and more readily abandoned under emotional stress. The child may then manifest early aggression and conduct problems. From the point of view of appropriate intervention, it is probably more helpful to view this kind of aggression as an understandable adaptation rather than demonizing it as an incomprehensible genetic aberration, even if these behaviours are primed in some individuals by a very sizeable genetic component acting transactionally.

Linking attachment and mentalizing has been made easier by recent neuroscientific research. Neuroimaging studies, for example, have confirmed the association between attachment and mentalizing: the dopaminergic reward-processing system and the oxytocinergic system have been shown to play a vital role in establishing social bonds and regulating emotional behaviour. The role of the dopaminergic reward system in attachment behaviour is considered an evolutionary mechanism to motivate reproductive mating, maternal care and offspring survival: it leads individuals to seek close relations with other humans and produces satisfaction when close relations are achieved.

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Oxytocin is a neuroactive hormone produced in the hypothalamus and projected to brain areas that are associated with emotions and social behaviours. It plays an important role in the activation of the dopaminergic reward system and in the deactivation of neurobehavioural systems related to social avoidance. Laboratory animals with a genetic mutation rendering them devoid of oxytocin do not develop normally in terms of sociability and caregiving. Oxytocin helps promote social behaviour; for example, monkeys without oxytocin do not read social cues as well as those with oxytocin, and they fall to the bottom of the troop status hierarchy. Oxytocin also promotes the 'caregiver's bond'. Female rats without oxytocin mother poorly, and this has downstream effects on their female offspring, which themselves grow to have limited competence in maternal behaviour. Oxytocin is a facilitator of attachment: it enhances sensitivity to social cues, accelerates social connectedness (Bartz and Hollander, 2006), improves social memory, and facilitates the encoding and retrieval of happy social memories. By attenuating activity in the extended amygdala, oxytocin also acts to neutralize negative feelings towards others and enhance trust. Oxytocin can inhibit hypothalamic-pituitary-adrenal (HPA) axis activity when the attachment system is activated: secure attachment leads to 'adaptive hypoactivity' of the HPA axis, which, in turn, reduces social anxiety.

The effects of oxytocin on an individual's behaviour depend on social circumstances. It seems to facilitate prosocial behaviour toward members of the in-group only, and to enhance trust towards reliable and neutral peers but not those who have proven to be unreliable. Oxytocin, therefore, does not always facilitate trust and prosocial behaviour: its behavioural effects are mediated by the social context, personality traits, and the quality of early attachment (Simeon et al., 2011). Similarly, insecure attachment is bound to the divergent effects of oxytocin. Oxytocin is found in lower concentrations in maltreated children, adults with a history of early separation, and in insecurely attached mothers during the puerperal period (Fonagy et al., 2011).

There are, then, three types of association between aspects of social cognition and attachment. (1) Mediated by dopaminergic structures of the reward system in the presence of oxytocin and vasopressin, the love-related activation of the attachment system can inhibit the neural systems that underpin the generation of negative affect. (2) Threat-related activation of the attachment system (e.g., triggered by perceived threat, loss, or harm) may evoke intense arousal and overwhelming negative affect, bringing about an activation of posterior cortical and subcortical areas and switching off frontal cortical activity including mentalizing. (3)

Meanwhile, a secure and predictable attachment relationship may be most effective in *pre-empting* threat, which possibly reduces the need for frequent activation of the attachment system.

Disturbance of attachment relationships undermines the acquisition of balanced mentalizing abilities, a key social-cognitive capacity, and thus creates profound vulnerabilities in the context of social relationships. Mentalizing clearly has great significance in terms of clinical practice: the development of mentalizing based therapy, in the first instance for individuals with borderline personality disorder, seeks to improve the capacity to mentalize, creating a more stable sense of self, stabilizing relationships and strengthening affect regulation. As a theoretical formulation rooted in attachment theory and with significant therapeutic applications which are derived from psychoanalytic practice, mentalizing provides a practical mechanism for the psychoanalytic integration with attachment.

In the paragraphs above, we have discussed how insecure and unpredictable attachment relationships may create an adverse social environment for the acquisition of mentalizing. This work is based on the theory of natural pedagogy, which explains how this acquisition or learning process is smoother for secure infants: (Csibra and Gergely, 2011) (Csibra and Gergely, 2009). Pedagogy theory predicts that young children will initially view everything they are taught as generally available cultural knowledge, shared by everyone (Csibra and Gergely, 2006): when they learn a new word for something they do not need to check everyone else knows this word. Similarly, young children assume that knowledge of subjective states is shared and that their thoughts or feelings are not separate or unique; only gradually do they learn a sense of the uniqueness of their own perspective.

The establishment of subjectivity is linked to attachment via the experience of consistent ostensive and accurate referential cueing, which in most nornative experience would be experienced via what attachment theorist describe as 'sensitive parenting'. By providing second-order representations on the one hand, and modelling mental reasoning schemes to make sense of action on the other, the relationship with the mind-minded reflective caregiver transforms the child's implicit and automatic mentalizing into an explicit, potentially verbally expressible, and systematized 'theory of mind'. Aspects of secure attachment such as attunement sensitivity serve to teach us what we cannot learn about the world by simple observation: subjectivity is a clear example of this kind epistemically

opaque phenomenon. Secure attachment and mind-minded reflective mirroring from caregivers build awareness to include internal states, eventually making self-prediction and emotional self-control possible. The benign effects of secure attachment arise at least in part out of superior competence at ostensive cuing in the infant's environment: the caregiver is able to mentalize the infant, and by appropriately responding and mirroring the infant's state, the infant can learn about their own subjective self.

Secure attachment and skilled mentalizing also assist the infant in another problem that arises in relation to learning: protecting oneself from misinformation from individuals who, whether through hostile intent, competition or indifference, do not have a shared investment in the juvenile's learning. It is adaptive to adopt a vigilant stance towards unproven or untrustworthy sources. By the age of 3–4-year, children become aware not only that knowledge is not invariably shared, but also that it is not necessarily communicated with benign intent. In one study, preschool children responded differentially to information supplied by a 'good guy' versus a 'bad guy'. Passing the false-belief test – that is, 'having a theory of mind' – was associated with sensitivity to information coming from positively versus negatively connoted sources (Wilson and Sperber, 2012).

As learning is triggered by ostensive cues that share characteristics with secure parenting, the teaching of secure infants may be smoother than that of insecure ones. By contrast, disorganized attachment interferes with ostensive cues and would be expected to disrupt learning. It is expected that the influence of secure attachment will be particularly crucial in teaching the infant about his/her own subjectivity. Finally, the characteristics of communication associated with sensitive caregiving also reassure the infant about the trustworthiness of the information to be communicated. From an evolutionary standpoint, we may consider such ostensive cues (at least in infancy) to trigger a 'basic epistemic trust' in the caregiver as a benevolent, cooperative, and reliable source of cultural information (Gergely, 2007). This basic trust enables the infant to rapidly learn what is communicated without the need to test for social trustworthiness. Adults mainly teach infants they look after, for whom they have genetic reasons to care. Infants preferentially select their attachment figures to teach them what in the world is safe and trustworthy, but, further, to teach them how they can make sense of their own thoughts and feelings, and how knowledge of such internal states can help them navigate the wider social world (Fonagy et al., 2014, Fonagy and Allison, 2014). In terms of thinking about psychopathology, the interaction between attachment, mentalizing and epistemic trust relates to the experience of a breakdown in

epistemic trust – the disruption or closing down of the channels learning about the social environment – as a result of social adversity, especially attachment trauma. We suggest that epistemic mistrust may be the general factor that underlies the severity and entrenchment of psychopathology; and that this may be a more productive approach to understanding psychopathology than the discrete diagnostic categories that currently shape approaches to mental illness, but fail to capture the variability and symptomatic complexity of individuals' experiences of psychopathology across the lifecourse.

Conclusion

Secure attachment involves the firm expectation of distress being met with comfort and reassurance. But further, because secure attachment facilitates the emergence of psychic structures linked to emotion, an individual's entire representational system is likely to be more stable and coherent with a history of generally secure attachment experiences. The way we experience thoughts, including attachment-related thoughts and the cognitive structures that underpin these, may be seen as linked to physical aspects of early infantile experience. We now see insecure patterns of attachment as adaptations that maximize the chances of survival of the infant to reproductive maturity despite adverse conditions for child-rearing. In that sense, attachment – according to latest developments in our thinking – might best be understood as a form of adaptive social learning transmitted from primary caregivers about how best to navigate their particular social environment, with all its cultural and material complexities and challenges. This development in our thinking represents a turning toward the role of communication, and the communication of social understanding that is tailored to maximise the individual's functioning in their particular setting, as key to understanding the complexity of human subjectivity and psychopathology. Classical psychoanalytic thinking was concerned with the role of drives – particularly sex and aggression - and the unconscious motivations relating to them that shape the psyche; later twentieth century psychoanalytic thinking has emphasized the role of interpersonal relationships and their intrapsychic counterparts, again often unconsciously. We suggest that the acquisition of mentalizing and the development of epistemic trust in social communication, which in most normative human experience occurs in the context of early relationships with primary caregivers, may constitute a fruitful future focus for thinking about psychopathology and development. Such an approach may speak to some of the psychoanalytic criticism of the failure of attachment thinking to accommodate the full complexity of individual subjectivity. It also speaks to a

criticism that has been aimed at both attachment and psychoanalysis, their perceived failure to truly accommodate the complexity of cultural differences.

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