

Chapter 3

DEVELOPMENT OF THE SELF: BACKGROUND CONSIDERATIONS

SUMMARY

The theory and practice of CAT are based upon a consideration of current evolutionary psychology, genetics and developmental neurobiology and psychology. The CAT understanding of developmental psychopathology takes, in particular, detailed account of the role of experiences of emotional deprivation and trauma. Early interpersonal experience is seen to be fundamental to the development of the self and in particular to the acquisition of a repertoire of reciprocal role procedures. The development of this repertoire is partly influenced by individual temperament and occurs on the basis of our innate predisposition to intersubjectivity and joint sign-mediated activity.

The theory and practice of CAT is based on a clearly defined and radically social concept of the self. The mature self in this view represents the outcome of a process of development during which a genotypic self with a set of inherited psychological characteristics, including an evolutionary predisposition to intersubjectivity, interacts reciprocally with care-givers in a given culture and in the process 'internalises' that experience. In CAT the social meanings and cultural values intrinsic to such interactions are seen as contributing fundamentally to the dynamic structure of the self. This developmental process and its implications for psychological change is seen as critical in determining the focus of psychotherapy and will be considered in some detail in the next chapter. Before doing so we shall outline some of the background factors which play a role in determining and influencing the outcome of that process.

EVOLUTIONARY PSYCHOLOGY

There is an increasingly large and at times rather contradictory literature on the acknowledged effects of our evolutionary inheritance on our mental functions (Donald, 1991; Gilbert, 1992; Rose, 1995; Plotkin, 1997; Slavin and Kriegman, 1992; Tooby and Cosmides, 1992; Stevens and Price, 1996; McGuire and Troisi, 1998; Evans and Zarate, 1999). Since we are, in evolutionary terms, simply another product of that process, it is accepted increasingly that we carry within us certain evolutionarily more 'primitive' although originally adaptive predispositions to behave in certain ways at certain times and in certain circumstances. However, unlike 'lower' order species whose activities may be determined almost exclusively by stimulus-evoked, 'all or nothing', instinctual patterns, our species is characterised by a remarkable capacity, consequent to the development of our large frontal cerebral cortex (Innocenti and Kaas, 1995), to reflect upon and modify such patterns. In addition, our evolutionary development has given us the potential to acquire a capacity for intersubjectivity and an extraordinary ability, acquired through the process of socially meaningful, joint and reciprocal interactions, to 'read' or 'be in' the minds of others. It has been suggested (see Evans and Zarate, 1999) that this ability enabled our ancestors to exist effectively and advantageously in large groups, which have, for some time, been our 'environment of evolutionary adaptedness'. It is suggested that the ability to understand each other's minds and motives has been and continues to be of critical importance for our species and is reflected in our preoccupation with social intercourse and communication—including our predilection for gossip! More seriously, this also implies that whatever meaning or fulfilment there is in our lives is fundamentally social, a position with important implications for both psychotherapy and politics in our view.

However, discussion of our capacity to develop a 'theory of mind' by some of these authors within evolutionary psychology does not appear to have included serious consideration of the important role played during individual development by the internalisation of socially meaningful, interpersonal experience in generating mental structures and capabilities. Likewise, there is little explicit discussion of how natural selection occurred while people lived collectively and hence favoured what was adaptive to social life, nor the contribution of this process to the formation of mind, despite the stress on the general importance of culture in human evolution by many authors (see below). Most evolutionary psychologists, in common with even more recent psychodynamic theorists, propose an understanding of mind and self which is characterised by a cognitive, or at best an intersubjective, monadism. In this formulation, interpersonal experience is seen as 'mapped' or 'represented' within fundamentally individual, mental structures. Curiously, this very Western view of the self would almost certainly be incomprehensible to most members of traditional or 'primitive' societies. In this respect, the CAT model may well have something important to contribute to a dialogue with evolutionary psychology.

These various features of our evolutionary inheritance, in particular our capacity to be shaped by developmental experience and the internalisation of social meanings and cultural values, has largely contributed to the historic conceptual conflict between the protagonists of the effects of 'nature' and 'nurture'. This 'for or against' argument should, by now, be essentially redundant. As Plomin (1994) has remarked, the 'nature-nurture' debate is centred nowadays around the hyphen.

THE EVOLUTION OF COGNITIVE CAPACITIES AND OF CULTURE

In the view proposed here, although humans retain their biological characteristics, the sources of their evolutionary success are to be found in the ways in which they are radically *unlike* animals. These include notably (1) the enormously enlarged brains which enabled our ancestors to replace stereotypic and predetermined techniques with flexible, intelligent solutions in the struggle to wrest a living from nature and (2) the development of faculties, eventually speech, which enhanced their ability to work together and to pass on knowledge from one generation to the next. As a result of these changes, cultural evolution became a dominant factor in how humankind evolved biologically. As new social forms radically altered the behaviours and qualities of individuals likely to aid survival of the group, individuals evolved who could learn the skills and values of the particular group they were born into, that is, people whose nature it was to be formed by nurture. There is also direct biological evidence for the social formation of mind, namely the shaping of neural pathways which occur during early development. To quote a review of the field by Eisenberg (1995) 'Major brain pathways are specified by the genome; detailed connections are fashioned by, and consequently reflect, socially mediated experience in the world.'

How evolution led to the remarkably flexible and capable mind of modern humans will now be considered in more detail. Much of the following account is drawn from Donald (1991) who, by adding understandings drawn from cognitive psychology to the traditional sources in archaeological, anthropological and biological studies, offers, in our view, a convincing and fascinating reconstruction of the main stages in the evolution of the modern mind.

Four million years ago, our ancestors the australopithecines already shared food and labour and formed nuclear family structures. One and a half million years ago *Homo erectus*, blessed with a much larger brain, managed to build shelters, use fire, and develop better tools. Over the following period the size of the brain compared to that of other mammals continued to increase markedly, with a last period of rapid growth occurring 0.3 million years ago. These changes were accompanied by another significant anatomical development: the

evolution of the human vocal tract, with its capacity for the rapid generation of differentiated sounds allowing speech.

Donald describes how contemporary chimpanzees are capable of flexible and non-stereotypical ways thinking and of relating and how their social organisation is dependent on their capacity to remember 'large numbers of distinctly individual learned dyadic relationships'. The development of the human brain from an equivalent level went through a number of intermediate stages, each conveying greater cognitive and social advantages. During the first of these (the Mimetic culture), non-linguistic skills in representing, differentiating, rehearsing and communicating were elaborated. Knowledge could now be contained and communicated using metaphoric activities; both tool-using and sign-using were established. This allowed the greater cohesion of social groups, which developed complex structures sustained by group rituals. The semantic and social structures that developed over the million or more years of this phase were accompanied by developments in the brain which prepared the way for the addition of symbolic language, but it appears that this developed independently, existing alongside the mimetic modes which persisted and are still a powerful aspect of human communication. The evolution of the larynx and the acquisition of language in the Mythic age provided the individual with the basis for the conscious mobilisation of mental capacities. It also enormously enhanced the cohesion and purposefulness of human society by linking, in stories and myths, the guiding values and meanings of the group. The power of oral transmission is illustrated by the account of an Australian aboriginal myth which incorporates accurate descriptions of a terrain, recently identified, which has been under the sea for the past 8,000 years (Tudge, 1996). Another example is provided by New Zealand Maoris, whose ancestors arrived in a small number of boats. Traditional accounts trace the ancestry of different groups to one or other of these boats and genetic studies have provided confirmation of the groupings.

Speech is now the dominant mental function because, with it, both memories of events and descriptions of the skills and sequences which can be conveyed mimetically can be described and communicated in abstract, generalised forms. Language opened the way for the theoretic culture we now inhabit, where we are capable of analytic, de-contextualised forms of thinking which the earlier systems could not sustain. These functions were sustained in turn by the manufacture of pictorial or sculpted artefacts, perhaps initially serving mythic functions, and the development of external, physical mnemonic devices such as notched sticks, indicators of astronomical events, maps and eventually, 8,000 years ago, writing. The development of written records greatly increased the accumulation and transmission of information. External symbolic storage, vaster than any single mind could conceivably hold, has now become a dominant factor in human thought. Just as the development of tools and machines enormously extended people's physical capacity to change material objects so the brain developed the capacity to extend enormously the power of thought.

EVOLUTIONARILY PRE-PROGRAMMED PSYCHOLOGICAL TENDENCIES

Many authors (reviewed in Gilbert, 1992; Stevens and Price, 1996; McGuire and Troisi, 1998) suggest that pre-programmed patterns, analogous to those triggered by the 'innate releasing mechanisms' described by ethologists, may underlie our tendency to think and act in certain ways in certain circumstances. The Jungian concept of archetypes can be seen as similar. Whilst requiring careful attention as partial, possible determinants of human behaviour, we consider that to exaggerate their importance can be as reductive and misleading as some of the attempts by earlier sociobiologists to explain culture in terms of the enactment of 'hard-wired' biological tendencies. However, according to these writers there are highly stereotyped, ritual behaviours seen throughout the animal kingdom associated with, for example, aggression, status-seeking, mating or care-eliciting and care-giving. The power and apparent 'irrationality' of such responses is well exemplified by the experience of falling in love or the dedicated preoccupation of a nursing mother with her baby. Gilbert (1992) has described the predisposition to enact such phylogenetically evolved 'biosocial goals' as 'mentalities'. This concept combines affects, action tendencies and cognitive and attentional structures. These are manifest in social life from early on and could be seen as analogous to or contributing to the formation of RRP. But since Gilbert does not consider the formative role of interpersonal experience or the processes of internalisation and cultural transmission, it is not clear that these 'mentalities' can be attributed exclusively to innate, inherited structures.

The behavioural patterns (for example care- or proximity-seeking behaviour) described by attachment theorists can also be seen to be subsumed within such repertoires. However, as pointed out by Gilbert (1992), they would be, phylogenetically, only one of many adaptive developmental behaviours rather than the all-important one as some writers in that tradition have more recently tended to suggest. However, attachment theorists (Bowlby, 1988) have properly pointed to the life-long importance of negotiation of issues relating to attachment and loss. In parallel, writers such as Stevens and Price (1996) have described the concept of 'frustration of archetypal intent', by analogy with the ethological phenomenon of the 'search for the object never known'. This could manifest, for example, in the case of someone who never had the experience of a good mother, as a life-long search for this never-experienced, perhaps idealised, relationship. This phenomenon can be recognised clinically and described in terms of role enactments and can be important to identify and work with.

Primitive, stereotypic responses to highly stressful situations provide perhaps more definite examples of such pre-programmed predispositions. These would include freezing or attacking responses to threat, the sensitivity to shame which we share with other social animals and the resort to dichotomous, 'black and white' thinking derived in evolution from the critical need to

distinguish friend from foe, or safe from dangerous situations. Some of these responses, particularly dichotomous thinking, may be a focus of psychotherapy, as may the stereotypic consequences of prolonged stress or trauma on the developing self (Kalsched, 1998). Primitive responses such as these are most often elicited in those who have been subject to threat and abuse during their own upbringing and can manifest in social phenomena such as racism, aggressive nationalism and stigmatising behaviour (see Zulueta, 1993). Expression of these will also be determined by the history, power relations and dominant ideology of different societies. By contrast, those who have been treated with love and respect tend to re-enact those roles and are capable of more considered responses to stressful situations. It should be noted, despite the history of our past century, that the dominant tendencies enacted by our species have been, and potentially are, those of cooperation, creativity and mutual interdependence.

GENETICS AND TEMPERAMENT

It is well documented by behavioural geneticists, as well as by evolutionary psychologists, that we arrive in this world with a considerable psychological 'baggage' in the form of both individual temperamental characteristics and also more general evolutionary predispositions to behave in certain ways in certain situations (Plomin, 1994; Aitken and Trevarthen, 1997; Stevens and Price, 1996; Gilbert, 1992; McGuire and Troisi, 1998). Thus, the human infant is very far from being a completely malleable and motiveless, naive being or 'tabula rasa'. Much of the variance in observed patterns of human behaving and thinking (personality) is due to variation in inherited temperamental factors. Of these, the so-called 'big 5' (neuroticism, extraversion-introversion, openness to experience, conscientiousness and agreeableness) are perhaps the best known and documented (Costa and McCrae, 1992; Deary and Power, 1988). It is similarly clear that a varying but significant amount of the variance in the prevalence of frank mental disorders is due to genetic factors. This may range from about 0.5 (i.e. about half) for manic depression and the schizophrenias (as tested in identical twins reared apart), to much lower but still significant figures for 'neurotic' disorders such as depression and anxiety (Plomin, 1994). These figures indicate the need to understand what sort of factors contribute to the remainder of the variance.

The implications of this for psychotherapy are considerable since it implies that a certain amount of what may be described as personality may be the effects of temperament rather than of developmental experience. As such they may be relatively immutable, raising the question of whether, in that case, the task of psychotherapy may be, in part, to help an individual to live with and manage their particular temperamental characteristics as well as to make sense of their consequences. The effects of temperament are rarely direct and will,

importantly, include the complex effects whereby the behaviour of a child will actually modify the responses of others and so their experience (Plomin, 1994), which will then, in turn, be internalised. Thus a demandingly aggressive or a highly anxious child will elicit very different responses from a parent compared to a more placid sibling. This mechanism ('non-shared family environment') accounts in part for the very different developmental experience which siblings may have had within the same family.

These inherited characteristics may be usefully conceived of overall in terms of 'vulnerability' and 'resilience' factors (Rutter et al., 1997; Plomin, 1994; and see Figure 4.1), although it does seem that some factors could operate as one or the other depending on circumstances. Thus, an increased predisposition to anxiety (broadly speaking 'neuroticism' in terms in the 'big 5') could compound the damaging effects of growing up in an abusive family resulting in a severely damaged self. However, lack of anxiety in another dangerous setting, such as a primitive jungle or a modern motorway, could result in disastrous consequences. Similarly, a degree of temperamental disinhibition could be invaluable in a creative artist or business entrepreneur but in a chronically stressful, unsupported setting could result in overt manic depression in someone so predisposed. It has been suggested that an important resilience factor may be an innate capacity for self-reflection or 'mentalisation' and the ability, for example as a child, to imagine beyond an immediately stressful or traumatic family situation (Fonagy and Target, 1997). It is not yet clear, however, how far such inabilities are innate and how far a consequence of developmental deprivation or damage. Genetic variability may also account for a tendency to dissociation (Silk, 2000). This may also have been evolutionarily adaptive in the face of overwhelming anxiety or stress, but if chronically and excessively endured during a traumatic childhood may have catastrophic effects on the developing self. It has also been suggested that individuals with a predisposition to obsessional or perfectionistic behaviour are more vulnerable to developing disorders such as anorexia. Although these factors are not the immediate focus of psychotherapy, we suggest that it is important to bear them in mind, especially given a common psychotherapeutic tendency to attribute difficulties or psychopathology entirely to an individual's developmental history and to think that personality is malleable and 'mendable' in all cases.

Developmental neurobiology

Neurobiological processes are involved in the developmental mediation and internalisation of experience through the processes of perception, cognition and memory and the neurophysiological substrates of these are beginning to be described in some detail (Schore, 1994; Glover, 1997; Toth and Cicchetti, 1998). However, it is inconceivable that the attempt to describe and account for higher mental function solely in physico-chemical terms will be successful. This was of

course Freud's great aspiration a century ago as described in his 'Project for a Scientific Psychology'. This attempt is based on the fallacious belief that highly complex systems can be understood by assembling models of their component parts. In reality, when new properties emerge new paradigms are required. More recent versions of this attempt to account for mental functions in terms of disordered biology by describing abnormal molecules, anatomical structures or functional brain scans has been described as simply 'referential connectionism' (McGuire and Troisi, 1998). The limits of this project are further determined by the fact that essential aspects of higher mental functions represent also the internalisation of cultural values and relate to issues of meaning and purpose. The 'emergent property' that is mind (Post and Weiss, 1997), characterised by consciousness, a sense of self, and the experience of free will and of 'spirit' (Samuels, 1985) points to the need for understandings beyond those based on physico-chemical laws (Solms, 1995). Such understandings we see as implicit in the aims of psychotherapy.

It is well known that the first few years of life (including intrauterine life) are a period of particular neural plasticity when processes of neurological development and maturation are still occurring (Schore, 1994; Eisenberg, 1995; Fox et al., 1994). Hence, this is a period of particular vulnerability. It has been documented in increasing detail in both animal experiments and in humans that early experiences of deprivation, stress and trauma can have profound and long-lasting biological effects. These in turn will clearly distort or restrict the internalisation and subsequent enactment of the reciprocal role procedures central to the CAT model of development even if they do not fully account for their subtlety and complexity. Damaged relationship patterns have, for example, been reported in socially deprived primates whose social and cognitive development is severely impaired and in whom apparently permanent abnormalities of neurotransmitter function are seen (Schneider et al., 1998). In rats, post-natal or intrauterine stress has been observed to lead to lifetime vulnerability to states of anxiety and hyper-arousal (Glover, 1997). Chronic stress may generate permanent homeostatic abnormalities in the developing hypothalamo-pituitary-adrenal (HPA) system whilst in the extreme case of post-traumatic stress disorder (PTSD) in humans, gross anatomical abnormalities ('scarring') of the hippocampus have been seen on brain scan (Bremner et al., 1995). The latter are said to be mediated by the toxic effects of elevated levels of glucocorticoid hormones and of various neurotransmitters. These also have powerful effects on emotional memory and also on the re-experiencing and re-enactment of traumatic situations when triggered. Clearly such reactions will affect an individual's reciprocal role repertoire. As such it clearly needs to be borne in mind that some of the role enactments encountered in therapeutic and other situations may be determined in part by such biological damage. They may also be relatively refractory to insight-oriented therapeutic work and possibly need more behavioural techniques to treat and modify them (e.g. the recently introduced EMDR—eye movement desensitisation and reprocessing)

(Van Etten and Taylor, 1998; MacCulloch, 1999). It is not yet clear how far such neurobiological abnormalities are reversible or modifiable by treatment, whether psychological or pharmacological, although there are reports (see Robertson, 2000) that the brain, even at later stages of life, may remain more plastic than at first thought. It is of interest that the functional brain scan abnormalities reported in the orbito-frontal cortex in severe obsessive-compulsive disorder revert to a more normal picture following both drug and psychological (cognitive-behavioural) treatment (Baxter et al., 1992). This raises the fascinating possibility that, as well as neurobiological damage occurring through psychological causes such as stress or emotional deprivation, conversely, neurological changes may be brought about by psychological treatments. This is a further argument against any mutually exclusive biological or psychological models of mental disorder (see also Gabbard, 2000).

Implications of a trauma/deficit based model of psychopathology

This emerging body of neurobiological evidence, combined with sociological evidence such as the pioneering work of Brown and Harris on the social origins of depression (Brown and Harris, 1978), indicates that an important cause of psychological disorder is actual experience of trauma, abuse or deprivation. This also supports the hypotheses of various writers in, broadly speaking, the 'deficit' tradition of theories of psychopathology (see discussion in Bateman and Holmes, 1995). This would include historic figures such as Ferenczi (see Stanton, 1990), discredited at the time for holding such views on the importance of real life trauma and on the reparative aspects of psychotherapy, Sullivan (1953) with his emphasis on the damaging effects of stress and anxiety on development, some of the British object relations school such as Guntrip, Winnicott, Sutherland (see review by Sutherland, 1980) and Khan (1973) with his theory of subtle, 'cumulative' trauma. Bowlby (1988) and the attachment theory tradition he engendered produced important evidence on the developmental significance of adversity and trauma. Kohut's (1977) self psychology model departed radically from classical psychoanalytic theory in stressing the importance of empathic care-giving in development and therapy. Recent findings in the field of infant observation have also confirmed the damaging developmental effects of early deprivations (e.g. through maternal depression) (see review by Murray, 1992). This area overall is well reviewed in Zulueta (1993) and Mollon (1993).

In addition to the overt effects of early deprivation and trauma on mental health, more subtle, damaging effects on general health and well-being have also been demonstrated as a result of psychological 'attitudes' acquired during an upbringing in low status socio-economic groups (Bosma et al., 1999). These 'attitudes' can well be understood in terms of reciprocal role enactments.

Such a model of psychopathology also points up the need for strategies to identify developmental trauma and deprivation as it happens and to undertake

preventative action. This has important social and political implications and has been in recent years an area of increasing interest in studies of child development and psychiatric epidemiology. Increasingly sophisticated analyses of populations at various degrees of risk are being undertaken along with definition of possible types of intervention which might reduce it (Mrazek and Haggerty, 1994; Albee, 1998). Some of these will be social rather than psychological. Apart from direct intervention with children, psychotherapy may, however, also play an important role in, for example, treatment of parents who may be at risk of damaging their children through their own disorders. Such models of developmental psychopathology may also play an important role in suggesting what sort of interventions, social or psychological, may be helpful. An innovative, CAT-based, early intervention for youngsters at risk of developing borderline personality disorder is currently being evaluated in Australia, the results of which will be of some considerable interest (Chanen, 2000).

IMPLICATIONS OF OUR EVOLUTIONARY PAST AND BIOLOGY FOR PSYCHOTHERAPY

Human personality is determined by the interaction between individual variations in the human genome and the practices, beliefs and language of the culture into which the individual is born. The scope for individual differentiation is huge, allowing genetically similar infants to grow into all the diverse contemporary and historical cultures. However, these cultural influences do not always prepare individuals well for the world into which they are born, and psychotherapists are engaged in trying to correct the resulting deformations. This may also involve them in identifying some of the requirements of the culture as damaging; the aim of therapy cannot be adaptation to every kind of political system.

The relationship of psychotherapy theory to the dominant beliefs and values of our contemporary societies is an area with political and moral implications which deserves more attention. The biological versus cultural debate is related to this: while psychotherapists need to accept the power of those biological factors which cannot be influenced by therapy, whether due to genetic or organic factors, theories which exaggerate biological and minimise cultural influences generate forms of treatment which in reality impose or justify a diminished status for the patient.

All therapies rely heavily on speech but few make much use of the concrete semiotic artefacts which, in evolutionary history, played so important a part in intellectual development. CAT makes use of writing and diagrams in the reformulation process just as our ancestors 10,000 years ago used their mnemonic devices, because the availability of these for re-reading and repeated application to events provides a much more powerful input than do purely verbal comments. One main purpose of reformulation is to make explicit, and there-

fore available to reflection, the patient's unreflected-upon interpersonal and internalised reciprocal role procedures. As mentioned above, chimpanzees can differentiate between a range of dyadic relationship patterns; through descriptive reformulation CAT opens these early learned patterns in humans to discussion and reflection. The use of words and symbolic devices does not mean that other forms of communication are left out, however, for much of the 'chemistry' of an established therapeutic relationship depends on 'mimetic' communication. What are often described by dynamic therapists as intuitive responses to 'the unconscious' are more probably reactions to unidentified mimetic communications, especially those not congruent with what is said, of which the patient may or may not be aware. The use of words or diagrams to explore and describe these can bring them into full awareness and into the therapeutic conversation.

The evolutionary story also suggests some ways in which CAT practice might be extended. For some people, as group therapists are aware, group experiences, with their capacity to mobilise parallel mimetic communications, have powerful alternative or additional effects to the dominantly verbal interchanges of individual therapy. For others, drawing and painting may provide a more powerful form of externalisation and symbolisation than language or the abstract diagrams of CAT; some CAT therapists do in fact combine the more 'conventional' tools with these methods. Role play and psychodrama, with their ritual components, combine the use of mimetic communication with the permitted expression of inhibited or forbidden affects. More active bodily involvement through dance, rhythmic exercises and music-making, which are essentially mimetic modes, have a long history as healing rituals in 'less developed' societies but are little used in ours. In treating psychological distress accompanied by somatic symptoms the fuller integration of physical treatments might be of value. These would address what in CAT terms would be seen as the incorporation and enactment of RRP's in body states and 'language'. This would also constitute a recognition of the way in which somatic symptoms may be understood as signs. The most widely applied methods in current use are those seeking to ease the secondary somatic effects of anxiety through relaxation, a procedure at once bringing ease and restoring some sense of control to the patient. Forms of meditation usually include physical relaxation as a means of diminishing symbolic mode thinking. These various procedures, it should be noted, are normally provided in therapeutic contexts which convey permission, acceptance or membership and serve to ease the demands and remedy the isolation experienced by many in our individualistic culture. It is to be hoped that, in the future, the indications for combining some of these methods with CAT will be evaluated.

Before considering in detail the therapeutic applications of CAT we shall next review its model of normal and abnormal development.

FURTHER READING

The issues considered in this chapter concern both evidence and interpretation. The extensive references in the text point to recent writing from various viewpoints. Of these, Donald (1991) provides an excellent synthetic account of the evolution of human mental processes, the paper by Eisenberg (1995) summarises the evidence for the impact of social experiences on the development of neural tracts and Stern (1985) provides a thoughtful and comprehensive consideration of observational studies and of their relation to psychoanalytic ideas. The paper by Aitken and Trevarthen (1997) offers an understanding of the early development of the self which has contributed to the position incorporated in CAT.