

# The Affectionate, Intersubjective Intelligence of the Infant and Its Innate Motives for Relational Mental Health

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## Abstract

Radical changes in developmental psychology in recent decades have important implications for the theory of mental health and the practice of psychotherapy. In particular, the fundamentally relational basis of the well-being and development of infants has been made clear. We are not born to thrive either as self-satisfied individuals, or only dependent on maternal holding, protection and feeding.

The change of understanding has come from careful observational and experimental studies of real (as opposed to speculative) infant consciousness, and its intimate and creative engagement with affectionate and playful parent-companions. Modern televisual and audio recording has aided discoveries made by analysis of spontaneous dialogues and games. The impetus for this body of work, for which a considerable prehistory may be traced, was led some fifty years ago by three inspiring practitioners – Jerome Bruner in education, T. Berry Brazelton in paediatrics, and Daniel Stern in child psychiatry – who believed that the motives, curiosity and emotions of infants with trusted companions had not been perceived correctly. Their new science describes infants as persons who, from birth, and indeed before birth, are inherently social, interactive, playful, collaborative and meaning-making in human ways, the motives of which are recently described in terms of a fundamental ‘communicative musicality’. The newborn child displays a need for the rhythms and tones of an innate ‘intersubjectivity’, a term abstracted from the phenomenological philosophy of Edmund Husserl.

Although initially controversial, this view of the extraordinary human ability of an infant is becoming widely accepted as the essential foundation for cultural intelligence, and its neurobiological underpinnings are currently being mapped out. This capacity includes a life-long need for a human person to

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experience a proper, healthy enthusiasm and sense of 'pride' in the company of appreciative others. Healthy, mutually-engaged social involvement with others, recollected as each person's life story, constitutes the growth, development and learning of a relationally constituted self, or personality (Trevvarthen and Delafield-Butt, 2015). Deprivation or adversity in relations and transactions with others may lead to serious psycho-developmental distress and damage to the life spirit, and thus loss of enjoyable and productive participation in society.

Misleading preconceptions lead to belief that infants are prone to be anxious or destructive as helpless organisms instinctively seeking intimate physiologic contact with their mothers for her care. They are believed to begin life as asocial and individualistic creatures that wait to grow and learn how to behave in social relations, a 'training' that requires 'conditioning' of reflex reactions by elders. Failure to recognise the inborn powers of affectionate communication and playful collaboration stands in the way of clinical understanding and care of troubled human intentions and feelings which need affirmation in companionship. An understanding that accepts the social genius of the infant has major implications for a richer appreciation of the relational basis of mental health and for the effective practice of psychotherapy.

Especially in Western cultures, there remains, it must be said, a curious paradigmatic resistance in much of the medical profession, in psychology and in education, predicated on mechanistic and individualistic neuro-cognitive or biomedical paradigms, to these changes, which inhibits scientific understanding of the foundation for human well-being. We need to comprehend, and correct, the justifications for this resistance.

**I**N THE LAST FIFTY years there has been a change in the scientific appreciation of innate human motives and feelings, and the forms of consciousness and memory they generate and regulate in sensations of body movement. We can no longer accept the theory of the newborn is an unconscious and unsocial 'Id' able only to give physiological or organic reactions to beneficial or harmful stimulations. The baby has a human mind seeking to learn how to live with meaning that is shared (Trevvarthen and Delafield-Butt, 2015).

Change of understanding has grown by studying the efforts that infants make to share feelings and invent meaning with loving parents (Trevvarthen, 1979, 1980, 2015a; Stern, 1985/2000; Bråten, 1998), and how acts of imagination of young children are developed in fun with a growing circle of playmates of all ages (Chukovsky, 1968; Bjørkvold, 1992). The

evidence has proved that our awareness of the world and of its cultural interpretation does not begin as a cognitive learning of facts about an impersonal reality by an individual thinker. Nor that it starts with instruction in how to articulate purposes and experiences in words.

The human primate is born with unique powers for sensing the intentions and feelings in other individuals' purposeful and inquisitive movements, and for elaborating stories with them. We are innately cultural. In affective engagements of interests between adults and children as they participate in stories and games, ideas are passed on from previous generations, and precious beliefs and rituals are recognized. The self-confidence and happiness of every adult and child with their family and in their habitual community depends upon this history of consciousness with feelings in intimate and trusted relationships that a child is seeking from birth.

There were earlier explorations of this life-story-making in good company. The convivial awareness of the infant mind had been appreciated in the eighteenth century, by Dietrich Tiedemann, and by Hutcheson, Hume, Smith and Reid in Scotland; and in the nineteenth century by Charles Darwin and James Mark Baldwin. But scientific confirmation of the importance of innate intersubjective awareness for a healthy lifetime came from developments in the use of film and television in the mid twentieth century. These tools enabled us to measure details of the rhythms and qualities of spontaneous performances and narratives of infants in recordings of play with attentive adults who love and admire them.

## The New Inter-Disciplinary Approach to Meaning

The findings demanded a different kind of 'cultural social psychology', developed by Jerome Bruner from the 1950s to oppose the mechanistic learning theory of behaviourism. Bruner underlined the innate capacities of the child for sharing intentional life with emotions to create a personal narrative, and to take part in education for an interpersonal cultural world (Bruner and Goodman, 1947; see Bruner, 2003, chapter 3, 'The Narrative Creation of the Self'). The anthropologist Clifford Geertz likewise transformed thinking about the symbolic forms that humans invent to create and sustain the community life of their culture, and to define 'public meaning' in that culture (Geertz, 1973).

Bruner devoted his long life to comprehension of the acquired cleverness of a 'person-in-relations', a being who has acquired command

of language. He did not directly study the innate 'self-as agent' of a baby who is seeking recognition of his or her purposes in the affectionate companionship of innocent play, without words, from birth. I am using the titles of two influential books by the Scottish Professor of Moral Philosophy John Macmurray (1959, 1961). The developmental psychologist Margaret Donaldson, who was inspired by Bruner's work, made a comparable distinction in her studies of early childhood consciousness and its learning in communication (Donaldson, 1978). A pre-cultural or pan-cultural 'human sense' of life in affectionate relations of infancy is expanded in the playful preschool stage to become the foundation for all that is acquired of the 'common sense' of knowledge that sustains a particular culture. Donaldson applied her findings to develop a theory of the natural 'modes of the human mind', and how they grow to master and transcend immediate practical demands (Donaldson, 1992). Anthropologist Victor Turner (1982), like Geertz who wrote about 'deep play', celebrated the innate source of creativity with research on theatrical rituals, which he called 'the human seriousness of play'.

#### *A Sociopsychobiological Account of the Early Development of Human Consciousness*

Around 1970 three independent research projects gained evidence from micro-analysis of film of intuitive abilities that young infants use to share life in creative face-to-face play with their mothers (reviewed by Trevarthen and Panksepp, 2016; Trevarthen and Delafield-Butt, 2016, in press).

An anthropologist and linguist Mary Catherine Bateson, who had studied universal gestural principles of human 'kinesics' or 'body language' described by the anthropologist Ray Birdwhistell (1970) as the origin and support for all spoken languages, worked with Margaret Bullowa in the Speech and Communication Group at the Massachusetts Institute of Technology to trace the early development of language (Bullowa, 1979). Bateson, shortly before the birth of her daughter, made the following detailed description of films of an infant 7 to 14 weeks of age in spontaneous interactions with the mother:

'... the mother and infant were collaborating in a pattern of more or less alternating, non-overlapping vocalization, the mother speaking brief sentences and the infant responding with coos and murmurs, together producing a brief joint performance similar to conversation, which I called 'proto conversation'. . . These interactions were characterized by a sort of delighted, ritualized courtesy and more or less sustained attention and mutual gaze.

Many of the vocalizations were of types not described in the acoustic literature on infancy, since they were very brief and faint, and yet were crucial parts of the jointly sustained performances.' (Bateson, 1979, p. 65).

Bateson was convinced that the infant was sharing ideas with a subtle grammar of movements without symbols, and that this is the motivation for learning language and for developing self-confidence in an oral or literate culture.

In New York, Daniel Stern a young psychiatrist studying psychoanalysis, who was also inspired by Birdwhistell's 'kinesics', found that three-and-a-half-month-old twins were not just responding to directives but actively directing their mother in exchanges of mutual attention by precisely timed engagement of expressive movements (Stern, 1971). This interest in the life of mother-infant communication (Stern, 2002) led Stern away from conventional ideas of child psychiatry to path-finding studies of *The Interpersonal World of the Infant* (Stern, 1985/2000), and to elucidation of the dynamic principles of 'affect attunements' (Stern et al., 1985) and *Forms of Vitality* in body movement (Stern, 2010).

In 1968 Bruner made a comprehensive review of new evidence on the origins of infant intelligence and learning, and he redirected the work of the Centre for Cognitive Studies at Harvard in a project called *Processes of Cognitive Growth: Infancy*, taking inspiration from ethological work on the cleverness of non-human primates (Bruner, 1968). With the support of the pediatrician T. Berry Brazelton, he set up a richly equipped research facility for the use of a variety of recording devices and high-speed film to observe motor patterns and selective attention in young infants.

As Dr. T. Berry Brazelton demonstrated to parents in sensitive encounters with the baby immediately after birth, a newborn is not, 'helpless and ready to be shaped by his environment' (Brazelton, 1979, p. 79). Rather he or she makes delicately organized actions as a person with a 'state of consciousness', and can be immediately responsive to corresponding actions expressive of impulses and feelings in another person's consciousness in movement. With this approach Brazelton revolutionized pediatric care of infants, and established principles for support for all ages through periods of developmental change, which he called 'touchpoints' for responsive care (Brazelton, 1993). We are born to take part with companions in intentional movements that we care about. Advanced science of animal brains confirms they build consciousness out of 'affective phenomenal experiences' mediated by 'sub-

neocortical networks of emotions and other primal affects' (Solms and Panksepp, 2012, p. 147). The human brain inherits this resource as the spirit for life in a meaningful culture.

With Brazelton's advice, and with Martin Richards, a zoologist interested in maternal behaviour of mammals, I set up a private film studio in Bruner's Centre to record natural spontaneous communication between two- to three-months-old infants and their mothers, and to observe actions that the infants directed to objects. I used high resolution film techniques developed to observe intelligent manipulation of objects by baboons, to track the earliest consciously directed behaviours of humans. With a single camera, the behaviours of the infant were observed from directly in front, and the mother's behaviours were recorded from a large front-surface mirror placed beside the infant. Four important observations were made by frame-by-frame microanalysis of infants' movements in free activity with the mothers, or in response to objects they found interesting (Trevarthen, 1974, 1977, 1979): (1) In the first month the movements of the newborn were delicately coordinated to move many parts of the limbs, face, head and eyes to direct actions of selective attention to nearby objects; (2) The movements showed the same rhythmic patterns as similar actions of adults to explore experiences; (3) Movements two- to three-month-olds made with visual attention to perceive objects were different from those directed to have a dialogue with the mother. The latter included face expressions of emotion, 'pre-speech' movements of the lips with demonstrative gestures of the hands, and selective eye movements aimed to see expressions of the mother's eyes and mouth; Finally, (4), in proto-conversations at this age the infants were usually leading, with the mother mirroring or shadowing the infant's expressions and their manner or tone.

All these findings were evidence of prenatal development of adaptive intentional imagination of a moving Self who is guided by subjective consciousness of surroundings, and who felt special interest in inter-subjective engagement with the movements of another person (Trevarthen 2015a). I described this early form of perceptuo-motor intelligence with its special adaptation for communication and co-participation interests and feelings as 'primary intersubjectivity' (Trevarthen, 1979).

Richards and I called the different actions of the infants 'doing' with things, and 'communicating' with a person. In dialogues that were supported by the mother's expressions of affectionate interest the babies took the initiative. For most of their 'conversations' the mothers were



Figure 1:

'Photographic samples show how a mother may adopt postures and expressions to closely mirror what her baby does. The intense mutuality or harmony of the behaviour comes initially from the infant responding to the mother's friendly behaviour in kind. Then the development is principally due to the mother accepting the expressions of the infant as models for her expression, or, rather, as indicative of an emotion which she may both share with her infant and express in like manner.' (Trevarthen, 1977, p. 241).

From a film made at the Centre for Cognitive Studies, Harvard, in 1968. The infant is three months old. These pictures were first published in Trevarthen, 1974

imitating the infant's expressions of vitality and their emotions of pleasure, displeasure, interest or disinterest. Rarely did the infant imitate the mother. (Figure 1)

None of the three above studies used psychological testing according to an experimental protocol. All relied on detailed recordings that were studied later to measure their rhythms, serial ordering and intentional or affective forms and targets.

In his summary of the work at Harvard, Bruner emphasized that,

‘As the joint efforts within the Center have turned more toward infancy, there has occurred a gradual change toward the viewpoint of a naturalist exploring a new species, and away from an exclusive emphasis on the testing of specific hypotheses derived from a general theory of infant development. The objective of the research is much as it has been in the past: to elucidate the processes by which human beings achieve, retain, transform and communicate information.’ (Bruner, 1968, p. ii).

In that project, and in further work with young infants I made in Edinburgh, both the subjective self-regulations of the infant, and the inter-subjective patterns that sustained the ‘dialogues of movement’ were recorded in photographs and drawings traced from films. They supported the theory that the young infant has strong abilities for sharing intentions and feelings of an intimate intersubjective awareness with a responsive adult, using special actions of hand gesture, facial expression and movements of tongue and lips that had meaning for a partner. I identified these as preparation for speech.

‘We have found activity which is best called ‘prespeech’ because both the context in which it occurs and its form indicate that it is a rudimentary form of speaking by movements of lips and tongue. These distinctive movements are often made by young infants soundlessly. At other times young babies are very vocal, making a variety of cooing sounds as they move mouth and tongue. We note a specific pattern of breathing with prespeech even when sounds are not made.’ (Trevvarthen, 1975, p. 66).

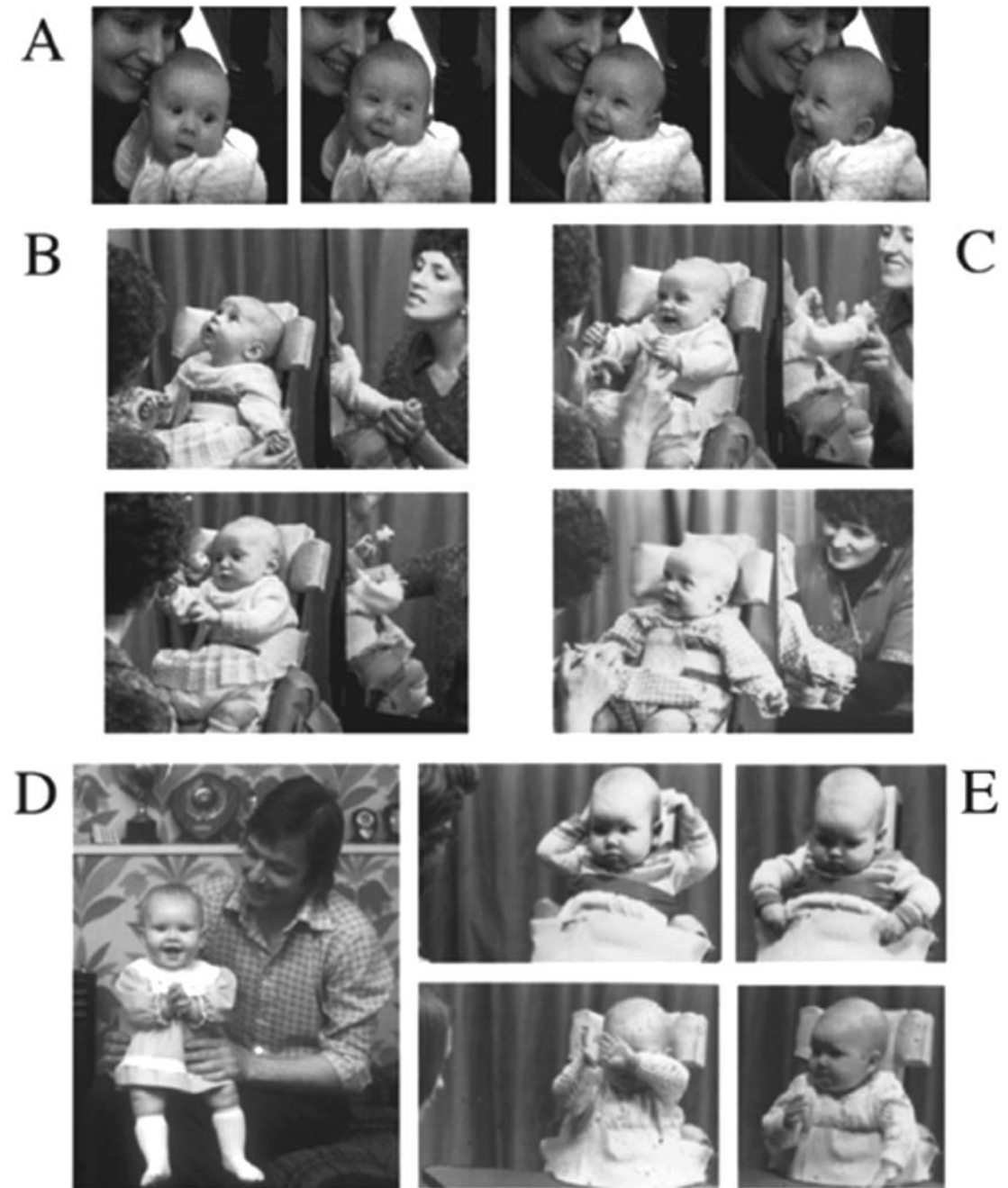


Figure 2: After 3 months infants’ bodies become stronger and their second person consciousness is more complex.

A. An 11-week-old shows a classic ‘coy’ reaction when her mother holds her up to a mirror (Reddy, 2008). (Reproduced with permission of Vasudevi Reddy)

B. A four-month-old infant is curious about the room and concentrates her attention on an object presented by her mother.

C. When her mother starts a rhythmic body game, the baby is both interested and pleased. At five months she is ready to participate in a ‘ritual’ action game, ‘Round and round the garden’, a rhyming four line stanza with a lively iambic pulse. The infant has learned the song and vocalizes at the end in synchrony with the mother and matching her pitch.

D. A six-month-old sitting on her father’s knee smiles with pride as she responds to her mother’s request to show ‘Clappa-clappa-handies’.

E. The same six-month-old shows her uneasiness and withdrawal in front of two strangers, a man and a woman, who attempt to communicate in friendly but unfamiliar ways. The infant appears to experience shame as well as distress.

These expressive movements of face and hands, special to humans, are now being observed in 4-dimensional ultra-sound moves of foetuses inside the mother's body (Reissland and Kisilevsky, 2015).

With an intense interest in the arts, especially dance and choreography, and after forty years' experience expanding his awareness of the innate capacities of infants and their mothers for being in affective connection, Daniel Stern, in his last book, *Forms of Vitality: Exploring Dynamic Experience in Psychology, the Arts, Psychotherapy and Development* (Stern, 2010), defined a science of 'vitality dynamics'. With information that relates the new research on movements of foetuses, and that on actions of infants and their mothers, to the principles studied by performing artists, Stern's concept of life in movement enriches our understanding of the nature of well-being and learning for human beings of all ages and of the appreciation of music as natural communication.

All our arts and sciences, our literature, and the projects of technology, grow in communication which is dependent on the expressive impulses of infancy: the *pulse*, *quality* and *narrative* of gestural and vocal story-making in good, responsive, affectionate, sympathetic, and playful company. The stories we share educate the special human capacities for manipulating objects with skill, using delicate touch, sight and hearing to confirm the impulses of the body to make and value new things.

#### *Internally Motivated Maturation of Infant Social Intelligence*

Work that has traced the development of the intelligence and communication through the first year established age-related changes 'growing' in the child, which affected their interests in both objects and persons, and coordinated these two (Trevarthen and Aitken, 2003). As an infant gains in perceptuo-motor abilities, especially the rapid development of high acuity visual awareness in the first 6 months, there are changes in their willingness to take part in sustained face-to-face proto-conversations with the mother, who is stimulated by this change in the infant's initiatives to be more active and playful, introducing seductive or teasing actions directed to capture the infant's interest (Trevarthen, 2011a).

From 4 to 6 months there are 'person-person games' in which the mother engages directly with the infant's expressive movements by making exaggerated performances to be seen and heard, or making solicitations to play with touching and manipulation of the infant's hands and feet (Figure 2). After this stage, as the infant becomes skilled at

reaching for, grasping, and manipulating objects, the mother uses the objects the infant finds most attractive as 'toys' in 'person-person-object' play. Commonly, from 4 months, mothers sing poetic nursery songs with particular patterns of timing that are independent of the language used, and they make action games, using rituals such as clapping or bouncing with the infant, also with regular timing. These patterns of behaviour share creations that are characterized by strong aesthetic feelings that measure the energy and elegance in movements, and regulation by these of narrative episodes that capture the infant's attention and participation with expressive vocalizations and gestures (Stern, 1999; Trevarthen, 1999; Gratier and Trevarthen, 2008). These efforts to gain engagement with another's interest are expressive of emotions of infectious joy in cooperation, or of earnest opposition (Trevarthen and Malloch, 2002; Trevarthen, 2005, 2015a).

There are significant elaborations of emotional behaviour from the middle of the first year that give the infant a stronger and more varied personality or presentation of a social self (Figure 2). A six-month-old boy or girl may typically act like a show off, and be eager to play vigorously, or he or she may usually be more timid and withdrawn, or absorbed in their private curiosity. In games inviting the infant to perform a learned action a lively baby often shows joyful pride directed to others' attention. Conversely, at this age, between 6 and 8 months, infants display anxiety or shame if approached by a stranger. The moral emotions of proud showing of skill, and of shame that withdraws or hides from another's attention, are beginning to define the boundaries of companionship with special companions and the shared meanings they value and repeat.

At the end of the first year a transformation in the infant's acceptance of a partner's actions to offer and animate objects leads to imitation of purposeful use of objects as instruments. Penelope Hubley, working with me to trace the changes in curiosity and motivation of a girl Tracey through her first year in her play with her mother led us to identify a 'secondary intersubjectivity', where the two of them were engaging intentions in a more equal and cooperative 'technical' way (Trevarthen and Hubley, 1978). They began to make complementary moves to share tasks, because at around 40 weeks of age the baby was eager to pick up instructions and to complete small projects that required selecting and displacing designated pieces so they became complementary parts of a single task set by the mother. For example, the mother was asked to invite Tracey to place small wooden dolls in a toy truck, not by showing the completed activity as a demonstration, but by making indications or directives with



Figure 3: A one-year-old shows her talents (see opposite)

A. In the recording room, Basilie enjoys the comedy when her mother pretends to be sad.

B., C. and D. Mastering a task. She takes the wooden figure offered by her mother, with a request 'Put the doll in the truck'. Basilie carefully puts it in the

speech and gesture (Figure 3). Hubley repeated this simple observation with five baby girls, and all began to follow indicative actions at the same age, between 46 and 54 weeks (Hubley and Trevarthen, 1979).'

*Play With Others is Felt To Be Meaningful If They Respond and Cooperate Intimately*

The process of enculturation that gives conventional purposes to a baby's movements is necessarily playful. It is inventive and pleasurable, especially when eagerly shared. Before a human being can reason in language and communicate experience symbolically, he or she has to exercise natural abilities for experimenting with purposes and feelings of an imaginative and creative Self with intense enjoyment of intricate compositions of vitality in body movement that others too enjoy in the moment of their invention (Stern, 1999, 2010). The intuitive human spirit of play for fun is the source and monitor of relational well-being and enjoyable life times (Trevarthen et al., 2014; Trevarthen, 2016; Meares, 2016). It is one principal resource for therapy when fears and hardships of life lead to retreat from discovery and from relationships (Stern, 2004). Nothing serious or satisfying can be achieved without play with actions and ideas supported by appreciative company.

Confirmation of the young infant's sensitivity for precisely contingent response and for the affective quality of the messages of a partner has come from experiments that deliberately interrupted or dissociated the responses of a mother in proto-conversation with a two-month-old. Distressed and withdrawn reactions of the infant to the mother when she was instructed to go 'blank faced' or 'still faced' and silent while she kept looking at her baby proved the infant's expectation of live feelings of being in relation (Murray and Trevarthen, 1985; Trevarthen et al., 1981; Tronick, Als, Adamson, Wise, and Brazelton, 1978). The infant's reactions (removal of gaze from the mother, and expressions of agitation,

truck (C): then (D) looks with a self-satisfied expression at her mother who says, 'What a clever girl!'

E. At home Basilie and her mother read. Basilie is studying her book, the mother is intently occupied with a document, perhaps a telephone bill.

F. Basilie drops her book and points to the mother's paper, with a critical vocal comment, 'jargon' without words, but with intense prosody communicating criticism. This appears to be a response to the concerned expression of her mother.

confusion and distress, then withdrawal into a depressed state) resembled the sequence of emotional states that John Bowlby (1958) and René Spitz (1945) had described for older infants separated from their mothers in hospital. Observations of young babies' reactions to strangers also indicated that a specific emotional attachment to the mother exists much earlier than had been expected (Trevarthen, 1984).

A more stringent test by Murray of the infant's sense of the timing or contingency of the mother's expressions when there is no change in the feelings expressed, employed communication mediated by a Double Television link between mother and baby who were watching the other person on the screen in separate rooms. Switching to a replayed televised recording of the mother as she had been talking in an attentive and friendly way to her baby in preceding minutes, frustrated the motives of a two-month-old infant for a live and sympathetic response 'in the moment' (Murray and Trevarthen, 1985). The replay situation, like the blank face test where expression stopped, caused the infants to become withdrawn and distressed, or depressed. Immediate, intimate and emotionally sensitive companionship is, from the first weeks after birth, an essential mediator of the developmental process that leads to symbolic communication of shared knowledge (Trevarthen 2015a).

#### *From Proto-Conversation to Proto-Language and Language: Sharing Meaningful Projects, Then Symbols*

Michael Halliday, a socio-linguist and expert in phonetics, learned about the nature of the child's attention to conventions of language by watching and listening to his infant son Nigel in vocal and gestural play with his mother from nine to twenty-four months (Halliday, 1975, 1979). He called it 'learning how to mean' and said that a 'child tongue' or 'proto-language', that caretakers understand, precedes the 'mother tongue'. The child achieves this by combining two modes of directed action, addressing (a person) and acting on (an object), into a single act in which the one is the representation of the other – 'an act of meaning'. The more active interpersonal functions are conveyed by gestures with vocalizations, while ideational functions of signs expressive of the infant's state of experience are purely vocal. Nigel enriched his protolanguage after 16 months by imitating expressions taken from the English language, and from two years he was using the language well.

Protolanguage requires that the child have clear differentiation of an integrated 'self' (with cognitive and affective processes) from the world

of 'others' (things and persons), but especially it must see persons as conscious, effective and interested partners in the giving and taking of meanings. The success of the child's expressive efforts depends upon an appropriate complementary expression of acts of meaning from the other, the significance of which, in turn depends upon this reliable participation. Both persons must work with a dual representation of 'self and other' (Buber, 1937). This is the core component of a mental system that motivates human intersubjectivity (Stern 1985/2000; Trevarthen 1986).

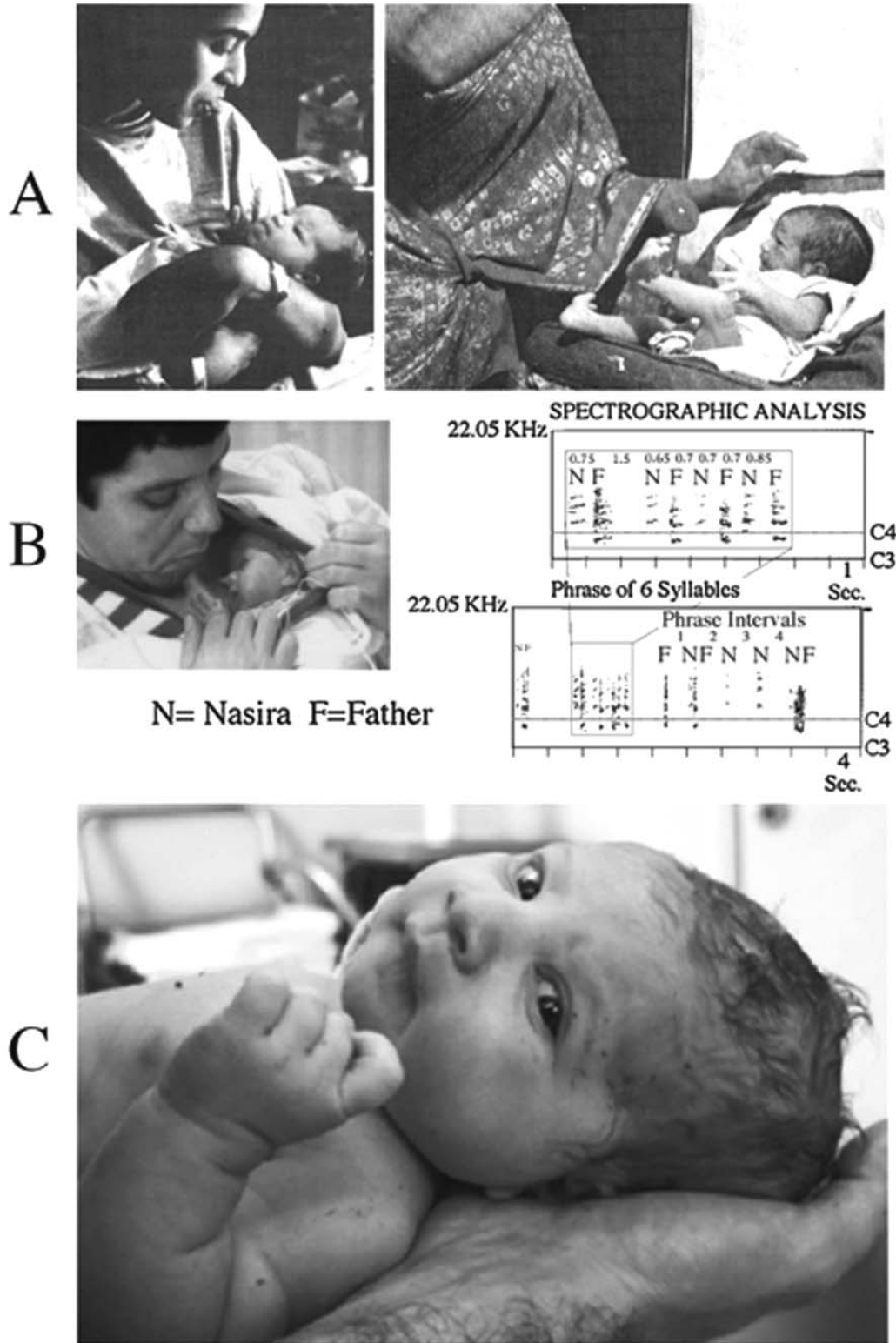
These extraordinary ways that the human animal develops 'languaging' as a 'consensual' way of life (Maturana et al. 1995) can be related to the intricate preparations of body and brain for such ingenious and sociable intelligence that give serial ordering to actions with a purpose. They are formed 'autopoetically' before birth (Maturana and Varela 1980). These lay the imaginative strategies for the serially ordered movements of verbal narrative, or logical thinking (Lashley, 1951). The evidence of early stages of the development of autism suggests that a root problem that the child is struggling with is a disorder of the formation of these prenatal developments in motives for sharing imaginative projects in movement (Trevarthen and Delafield-Butt, 2013).

#### *Neonatal Awareness and Imitation in Dialogue: Seeds of Personality Seeking Recognition*

The original generative sociopsychobiological impulse in the infant, which so strongly attracts and directs the interest and pleasure of another person leading to the development of a human sense for the meaning of life with others, remains a mystery. No topic has been more revealing, or more contentious, than the ability that a baby may show in the first hours after birth, to imitate – to 'mirror' expressive movements of other persons in discriminating, purposeful dialogical ways open to negotiation and emotional appraisal (Kugiumutzakis and Trevarthen, 2015).

A newborn human body is very immature, and its brain, though distinctly human, is small. It must adapt to the new environment outside the mother's body (Nagy, 2011). For many months the infant's life will depend on maternal attention, support, and care. Nevertheless, within minutes of an easy birth, while accepting gentle and affectionate responses in intimate contact, a baby may focus its gaze with intense interest at the eyes or mouth of other human being, making delicate hand gestures and sharing smiles or small vocal sounds, sometimes by direct imitation (Maratos, 1973; Meltzoff and Moore, 1977; Kugium-





utzakis, 1998, 1999; Butterworth, 1999; Nagy and Molnár, 2004; Reddy, 2008). The baby's postures, gestures, face expressions, and voice sounds are expectant of sharing experience and emotion in human company (Trevarthen, 2011b). The emotional exchange of parent and child is one of an instinctive reciprocal, playful 'sympathy' with complementary and constructive feelings, not the one-sided pickup of feeling now being identified as 'empathy' (Reddy and Trevarthen, 2004; Kugiumutzakis et al., 2005).

Recognition of the inborn self-other awareness that is essential for every kind of cooperative purpose has been difficult for medical doctors, psychologists and philosophers in their thinking about it, and writing explanations. This is an ancient problem. According to Plato and Aristotle, neonates cannot imitate. We are born in a state of 'initial dualism', unable to 'know' what is outside, separate from us (Kugiumutzakis, 1998). The Platonic neonate cannot recognize the other, or imitate. Aristotle agreed that at birth we are unable to distinguish the self from the other. Because the baby lacks memory and cannot discriminate similarities and differences, it has no positive emotions to express to a loving parent. Two hundred years later, in the second century AD, the Stoics taught that human newborns possess innate impulses of affection, an affinity for being an organism with self-perception that may be shared. Hierocles was the first to oppose the Aristotelian view with a thesis of innate social dualism or self-other awareness, for humans and for other animals.

Hierocles' insight was ignored by science for 2000 years. Ideas of initial 'dualism' prevailed until the last quarter of the twentieth century, with notable exceptions among philosophers of the Scottish Enlighten-

Figure 4: The human intelligence of newborn infants

A. Two newborns in a hospital in India. Shamini, two days old, imitates her mother's tongue protrusion. A boy, within an hour of birth, tracks a red ball moved in front of him to tease his interest gently. He tracks the ball with head and eyes, two hands and one foot.

B. Naseera (N), born three months premature, now 2 months premature, exchanges short 'coo' sounds with her father (F) who is holding her close to his body, 'kangarooing'. They share, with matching precision, the tempo and rhythm of syllables (0.3 seconds in duration, and separated by 0.7 seconds) grouped in a phrase (of 4 seconds). Then they make a sequence of single sounds separated by phrase-length intervals.

C. Ava, 57 minutes after her birth, resting on father's arm. Photograph taken by her mother to whom she looks intently and makes a left hand gesture.

ment, Frances Hutcheson, David Hume, Adam Smith, and Thomas Reid, who believed we relate by 'innate sympathy'. Charles Darwin, James Mark Baldwin, Martin Buber and John Macmurray also rejected Cartesian Dualism and opened the way to a new interest in innate relational or dialogic awareness, now supported by both psychological studies of infants (Reddy, 2008; Stern, 2010), and research on the brain mechanisms of self-regulation and other-awareness (Nagy, 2011; Ammaniti and Gallese, 2014). From the perspective of a modern relationally-based therapy model Ryle and Kerr have more recently re-stated this position aphoristically suggesting that '*We interact and communicate – therefore I become*' (Ryle and Kerr 2002).

Jacqueline Nadel became a leader in work on children imitating one another. Inspired by the theory of interpersonal communication as 'affective symbiosis' of Henri Wallon, she developed an ingenious play situation where toddlers too young to speak can discover joy in imitative games, trying imaginative negotiations about what to do by matching actions with familiar objects presented in multiple copies (Nadel, 2014). She developed ways to study the use of imitation of expressions and actions from birth through infancy to expand consciousness as the child's movements and senses of sight and hearing gain new powers. In everyday life, preverbal children often imitate familiar actions with identical objects, which become vehicles of social interest. By reproducing actions they already know well they explore and enjoy 'interaction', and this 'boosts development'. Her findings inspire her to study the benefits of sensitive imitative engagement with autistic children, testing their sensibilities and disabilities in ingenious ways. The success she achieved with this treatment has fundamental importance for educational and therapeutic theory and practice.

The other aspect of shared purposefulness and enjoyment is the timing of actions that are intended and imitated. Intelligence is by nature both intentional and rhythmic, and it is communicated with synchrony in movement.

#### *Motor Intelligence With Feelings In the Shared Pulse of a Hopeful Life*

All animals have a prospective control of movement in time, a 'model of the future', which is the foundation of all the knowledge and skills they can acquire (Bernstein, 1967; Feigenberg and Meijer, 1999). Large ones must imagine the consequences of excitation of contractions in hosts of muscles within their heavy and complex bodies, and direct their

integrated selves to act well in the spaces and media of the environment. Automatic 'reflex' response to stimuli, with no prediction, is too slow for efficiency and pleasurable grace. It is used to recover or escape from errors of judgment or ignorance. We share a particularly rich inborn human sense of time in the flow of motor activity, and this makes possible doing and thinking in cooperative ways, and sharing meaning by movements adapted to be story-telling signs for others (Trevvarthen and Delafield-Butt, 2013; Trevvarthen, 2009, 2015b). As veterinary psychologist and phenomenologist Barbara Goodrich says, reversing Descartes' principle, 'we do therefore we think' (Goodrich, 2010). Thought is about projects in movement of the body in its functional timing.

The collaboration of the senses in self-created movement was explored by the pioneering physiologist Charles Sherrington, who presented his findings as *The Integrative Actions of the Nervous System* in 1906. An intelligent animal has an inquisitive and experimenting brain that lives in the prospects of moving – performing actions that are monitored inside the body by *proprio-ception*, 'self-feeling' with information taken from joints, tendons and muscles, and which are made useful by *extero-ception* with inquisitive deployment of clever senses to test and taste the world outside the body. Compositions of awareness are not just 'filled in' by learning and remembered. In his Gifford Lectures of 1937-38, published as *Man on His Nature*, Sherrington, reflecting on his lifetime of research on the central nervous system as the integrative organ of an animal being in movement, made an interesting appraisal of the process of evolution and development from a fertilized egg of 'the man John Brown, or the woman Mary Smith, whose exact like never was yet':

'All that has come within the experience of that ancestry has been the launching from generation to generation of that side-adventure which now terminates in fully completed man. An explanation once offered for the evolutionary process traced it to 'memory' in the ancestral cell. But such an explanation rests, even as analogy, on a misapprehension of the actual circumstances. It would be imagination rather than memory which we must assume for the ancestral cell; memory could not recall experience it never had.' (Sherrington, 1955, Chapter 4, *The Wisdom of the Body*, pp. 103-104)

This imaginative life-story-making is estimated and regulated by *viscero-ceptive* feelings of organs that sustain inner vitality, including the gut, heart and lungs, which evaluate satisfaction of achievement in comfort, or fear of misapprehension and pain. These are sensations that

monitor the active body of the self, its dynamic creativity and social personality (Varela, Thompson and Rosch, 1991; Lakoff and Johnson, 1999; Damasio, 1999; Goodrich 2010; Gallese, 2016). An emotional brain beneath the impressionable cerebral cortex generates deliberate narratives of hopeful purpose and guards against misfortune, and expresses these joys and fears as emotions to be felt by other persons in sympathetic engagements (Panksepp and Biven, 2011; Porges, 2011). This core organ of the Self projects motive guidance in measures of 'life time' into the vocal articulations of knowledge and skills acquired by ancestors (Lieberman, 2006).

Nikolai Bernstein (1967; Feigenberg and Meijer, 1999) used film to accurately trace the regulation of forces in the moving body of a workman using tools. He proved their skilled movements are always rhythmic, smoothing out the forces through planned steps of time. He also measured the movements of toddlers beginning to walk, and showed they play with the forces in running, hopping, jumping, creeping – exploring 'degrees of freedom' of their actions. They were moving in risky ways enjoying anticipation of what would happen, not making mistakes. David Lee, with his 'tau' theory, has confirmed by mathematical analysis that all goal-directed animal movements express prospective regulation by the brain of actions in a single space-time field monitored by all the senses (Lee, 2009). He has neonates sucking for milk, and their arm movements to touch or hold parts of the body, which are soon elaborated to make good use of objects grasped, before the movements of speaking are learned.

#### *Protecting the Impulses for Making Up Life Stories and Sharing Them In Movement*

Various forms of health care for a depressed and damaged human spirit, a Self, that has become threatened by persistent anxiety resulting from thwarted life-seeking, needs to reflect on how an infant is born capable of communicating intentions and feelings in serially ordered body movements. How efforts of proto-conversation lead to creation of meaningful knowledge in affectionate dialogues with intimate companions offers a model of the natural process of personal change that may guide therapy. Daniel Stern, a psychiatrist who was inspired to create a new more positive theory of psychotherapy by his research on infants sharing play with their mothers (Stern, 2002, 2010), explained his changed ideas of *The Interpersonal World of the Infant* in a response to appreciation by his readers as follows:

'One consequence of the book's application of a narrative perspective to the nonverbal has been the discovery of a language useful to many psychotherapies that relies on the nonverbal. I am thinking particularly of dance, music, body, and movement therapies, as well as existential psychotherapies. This observation came as a pleasant surprise to me since I did not originally have such therapies in mind; my thinking has been enriched by coming to know them better.' (Stern, 2000, p. xiv).

The 'composition' of a harmonious and sometimes thrilling life combines the values of moments in sequences of action or thought that resemble melodies, as the philosopher Susan Langer observed.

'There are certain aspects of the so-called 'inner life' – physical or mental – which have formal properties similar to those of music – patterns of motion and rest, of tension and release, of agreement and disagreement, preparation, fulfilment, excitation, sudden change, etc.' Langer (1942, p. 228).

Research on dialogues with infants has brought to light the poetry or music of the shared patterns of relating that build affectionate, playfully creative and trusting relationships that benefit both child and adult wherever they may be (Trevarthen, 1999; Schögler and Trevarthen, 2007; Gratier and Trevarthen, 2008). A musician Stephen Malloch helped me understand this meeting of minds between an innocent and inexperienced infant and a parent. By studying recordings I had made of spontaneous proto-conversations, and nursery games and songs shared by mothers and infants two or three months old, and applying his training as a skilled musician and researcher in the physics of musical acoustics (Malloch, 1999). He observed that the primary intersubjectivity of human dialogue has delicate regulations of 'pulse', 'quality' and 'narrative' that shaped sounds of the human voices in beautiful duets. 'Quality' identified the physical dimensions of loudness, pitch and harmony or timbre. 'Narrative' is the transitory enjoyment of story-making movements made in collaboration between two human spirits sharing their awareness of moving. Stephen's theory of 'communicative musicality' has proved attractive and illuminating for anthropologists, developmental psychologists, linguists and clinicians (Malloch and Trevarthen, 2009). It helps us conceive a different approach to psychotherapy (Trevarthen and Malloch, 2000, 2002).

### *Constructive Teaching Is Collaborative: Education as Play With Meaning in Relationships*

I have recently collaborated with two musicians and a developmental psychologist, educators who have very wide intercultural experience, in two reviews of the principles and practice of early education (Trevarthen, Gratiar and Osborne, 2014; Trevarthen and Bjørkvold, 2016). The purpose was primarily to give an account of how the passing on of Carl Jung's 'collective unconscious' or the acceptance of 'received wisdom' for a particular history of community has been understood as a process that cultivates a collective creativity of human nature. In this education two processes compete for recognition: one in which learners animate their progress with teachers' help; or one that prescribes an artificial transformation of the pupil's awareness by instruction to fit institutional requirements (Donaldson, 1992, Chapter 15, *Other and Better Desires: Prospects for a Dual Enlightenment*)

We refer to the work of a nineteenth century Lecturer in Education at Cambridge University, Robert Hebert Quick, who published *Essays on Educational Reformers* (1894) on the lives of experienced and dedicated teachers who, since the sixteenth century, have opposed practices of schooling restricted to instruction in religious doctrine and in academic skills of literacy and mathematics. Supporting a philosophy of humanism, one that cherishes the natural abilities of young children and their learning of both cooperative skills and social responsibility in joyful play, they inspired what Quick called 'a growing science of education'. This was intended to help parents and teachers welcome the initiatives of all children to share interests and feelings about the world, as they strive to appreciate and use it in playful ways.

The Jesuits in the sixteenth century, with François Rabelais, criticised the restriction of teaching to book learning, and 'pouring in' formulated knowledge, and said children need to exercise their bodies as well, and to feel 'love for the teacher' as a companion. In the seventeenth century, Jan Amos Komensky, or Comenius, became famous in Europe and in America for his appreciation of the life powers of young children and was invited to reform schools in Sweden, to advise the English parliament in 1641 and to be principal of Harvard, the last of which he could not accept. In his *School of Infancy* Comenius described the best principles for bringing up children for birth to the age of six (Quick, 1910, pp. 144-145). His ideas are now supported by scientific information on early communication and the growth of knowledge and understanding.

Johann Heinrich Pestalozzi and Friedrich Froebel, who at the beginning of the nineteenth century, followed Comenius in their efforts to reduce misfortunes of young children and promote their enjoyment of learning, inspired Quick's 'growing science of education'. They anticipated the support Jerome Bruner gave to the work of Loris Malaguzzi who, created an early education philosophy after the second World War that seeks to encourage the 'hundred languages of children'. There is currently an intense world-wide debate about how to reconcile methods of instruction to promote early mastery of language and mathematics with the fundamental needs of children as enactive discoverers of meaning who seek responsive teachers as they master ways of creating images of their understanding and mature symbolic communication of formal literacy and computation.

Jerome Bruner and his colleagues at Harvard and Oxford defined three systems by which a developing child motivates the discovery of knowledge and shares its meaning, all of which remain active through a lifetime of education. Learning is 'enactive' when the child uses action to explore or manipulate objects; it is 'iconic' when mental images, usually visual, recall ideas and purposes; with practice of shared conventions it becomes 'symbolic' reasoning with language and other systems of meaning.

### Relational and Creative Therapies Offering Companionship To Heal and Build Confidence of a Meaningful Social Self

The understandings emerging from the body of work described above are clearly important in relation to our concepts of healthy development and mental health, and also for treatment approaches in general to the distressed or damaged self (Trevarthen 2015a). As such they represent a radical challenge to currently-dominant individualistic and mechanistic paradigms of mental health. In this section I will aim to reflect, from the perspective of infant and developmental psychology, on the ways in which these understandings are currently incorporated in various, more relationally-based, treatment models and modalities, and also on how they might inform future thinking about mental health and contribute to a new meta-perspective on treatment and how it is conceived more broadly.

It is clear from the psychotherapy literature that, despite the extra-

ordinary and confusing proliferation of 'brand-name' approaches, certain common factors are largely responsible for most of the variance in treatment outcome. This remains the case notwithstanding the jargon and rhetoric about effective components of treatment of the various models, whether or not they purport to be relationally-based. This results in the so-called 'equivalence paradox' whereby all approaches that embody certain 'common factors' are likely – depending also on patient and contextual and social factors – to be helpful and effective. The best recognised of these would be the strength of the so-called 'therapeutic alliance' – notwithstanding that this appears to mean significantly different things for different writers. At times this appears to refer simply to patient engagement with and regular attendance at therapy, or the performance of prescribed tasks – through to a patient experience that their therapist is empathic, validating of their story, and collaboratively involved in meaning-making and problem-solving with them. This 'equivalence paradox' is well-documented by leading outcome researchers (e.g. Wampold (2001), Gabbard, Beck and Holmes (2005)).

Given the emerging understandings from infant psychology described above, it seems likely that this variance can be accounted for in terms of the extent to which the relational underpinning and origins of patient problems and distress are explicitly acknowledged and accurately described, and the extent to which treatment is authentically relational, benign and collaborative, or sympathetic from the patient's perspective.

These understandings would also predict that obstinate and rigid adherence to manualised protocols or didactic prescribing of tasks, which appear increasingly to bedevil psychotherapy, would be likely to undermine engagement with, or the effectiveness of, treatment.

Many treatment models and modalities have adopted a predominantly relational approach to the understanding and treatment of mental health problems over recent years albeit in different ways and with different ostensible emphases (for an overview see Gabbard et al. 2005). These would include more relational ('object-relations') modifications of psychoanalysis, Kohut's self psychology, group analytic models, family therapy and systemic approaches, narrative and dialogically-based approaches, as well as numerous more integrative and 'creative' approaches. It would be futile and unhelpful to attempt to address all of these individually in the light of the above considerations. Rather I shall attempt to highlight some significant features of a few models I am more familiar with and that appear of interest and relevance, and that illustrate some of the issues in challenging ways.

### *Music Therapy: Intimate Sharing of Feelings in Movement With Sound*

Improvised music therapy seeks to make a creative partnership of a patient with a musician who has been trained in the responsive performance of sounds of movement with feeling, with or without words. In one-to-one sessions or in group sessions the aim of the therapist is to strengthen self-confidence and to explore and enable the resolution of feelings that shut out happiness and sense of achievement. The performance has been compared to mother-infant communication and jazz improvisation (Schögler and Trevarthen 2007), both of which are based on reference themes and intuitive rules of variation, predictability challenged with chance accidents and discoveries, which 'play' with or 'tease' a partner's anticipation and pleasure in sharing (Ansdell 1995; Gratiar and Trevarthen 2008). As with other therapies, music therapy requires a sensitive and sympathetic 'contract' between therapist and client, or in a group, in intimate communication (Meares 2005; Wigram and Elefant 2009).

For example, a confused and self-absorbed child can discover confidence and joy in company through self-expression in carefully managed steps of intimacy with an adult who is skilled at using imitation and creative extension in melodious sounds in a way that the child can anticipate in 'playful' dialogues that lead to a fuller participation in a flowing musical collaboration, expressing mutual affection in melody (Nordoff and Robbins, 1977/2007; Bruscia, 1987; Wigram et al., 2002; Wigram 2004; Oldfield 2006; Zeedyk 2008; Bond 2009; Osborne 2009; Wigram and Elefant 2009).

Group music therapy, dance therapy and drama therapy inspire collaboration among performers, strengthening different ways of being, different personalities and different talents. Experimental and non-experimental case studies confirm the therapeutic value of improvisational music therapy (Nordoff and Robbins, 1977/2007; Wigram et al., 2002; Oldfield, 2006; Wigram and Gold, 2006; Wigram and Elefant 2009). Stages of the process of music therapy in groups can be measured to demonstrate how confidence and shared experience may grow (Pavlicevic and Ansdell, 2009) to heal disorders of autonomic regulation that may harm essential functions of the body.

Nigel Osborne, who has spent twenty years helping young people severely traumatised by war in Bosnia-Herzegovina, uses a 'biopsychosocial

paradigm' that integrates understanding of the physiological, psychological, and social needs in a single model, 'in which practitioners may feel confident in the potential of their work to effect positive change, and where the development of practical methods and methodologies may take place with the general support of current scientific research' (Osborne 2009, p. 335). Music therapy with this breadth of understanding can help a child who has been abused deal with both the psychological and physiological symptoms of mental trauma (Robarts, 2009). Music can directly modulate brain systems to reduce both psychological pain and physical pain (Bernatzky, et al., 2011).

### *Beyond Psycho-Analysis*

Classical Freudian psychoanalysis followed the rational medical practice of searching for a diagnosis of emotional disorder in an individual patient, a single subject with a 'personal unconscious'. It presumes there is a developmental physiological change in a component life system of that person that regulates stimuli that excite pleasure and pain. In consequence of this 'neurotic' change, he or she has been unable to build self-confident habits for dealing with life or, especially, for communication in affectionate relationships or attachments. The primary assumption is that a proactive and adaptive Self is acquired through the successful negotiation of (speculative) psychosexual developmental stages. Successful treatment was understood to be achieved through the 'interpretation' of these (unconscious) conflicts by a detached, uninvolved analyst. Some later versions of Freudian theory (e.g. 'object relations') have stressed the developmental importance of internalisation of caring (or malign) relationships. But recognition of the spontaneous development of a thriving, relationally-formed Self with an imaginative and imitative consciousness through a process that imitates the playful activity of a young infant, who is alive in normal intimate and loving relationships that create meaning joyfully, looks beyond this reductive clinical philosophy. That new understanding is what Daniel Stern achieved in *The Interpersonal World of the Infant* (1985/2000).

Various other practices of therapy developed in recent decades from unprejudiced reflection on the process of therapeutic change have evidently been inspired by the new infant psychology, and by consideration of dynamics of life of individuals in families and communities. The observations have led to the adaptation of practice to events arising in live interpersonal relationship with the client, or between

members of a family receiving psycho-social care, require deep modification of the psychoanalytic model because they give primary importance to an intuitive human need for reciprocal or sympathetic support of shared imagination in embodied activity which is playfully creative and enjoyable. All regard the patient-therapist experience as a consensual system animated by consilience between autopoietic processes of intentional agents seeking cooperation (Maturana and Varela, 1980; Maturana et al., 1995). All have been advanced by attention to the findings of micro-analysis of motor activities and emotional expressions between healthy infants and adults in early months after birth, and age-related developments that follow.

### *The Conversational Model*

An English physician and psychiatrist Robert Hobson, working in the Maudsley and Bethlem Royal Hospitals in London, used audio and video recordings in clinical supervision to check on the limitations of a therapist's oral or written recollections of their work and attempts to specify explanations according to psychoanalytic theory. He found that these descriptions 'after the fact' miss subtle and rich details in the human encounter of emotions conveyed by changing attitudes and gestures and by the intonations of speech, with which the patient shows their sense-of-self or personal being, and how this grows strong or weakens in conversation. With his colleague Russell Meares he also published a controversial challenge to the predominantly 'withholding' and 'inscrutable' therapeutic practice of the time, arguing that this would likely be actively harmful (Meares and Hobson 1979).

Hobson developed a Conversational Model based on a set of principles for listening and learning, by which patient and therapist seek both self-confidence and mutual appreciation (Hobson, 1985). He clarified the poetic powers of metaphor by which the patient regulates their feelings in intimacy with the therapist, how the effort they make to become recognized and understood can enable them to abandon emotional defences and regain a sense of personal well-being. These principles of a more authentic and receptive communication of feelings were adopted by Hobson's colleagues in Manchester and developed as a Psychodynamic-Interpersonal Therapy (Guthrie, 1999). This method has been successfully used for various presentations including self-harm and psychosomatic disorders (Hamilton et al. 2000).

Hobson's colleague Russell Meares, who became Professor of

Psychiatry in Melbourne and in Sydney, has developed the model further, in particular for patients with 'borderline personality disorder', conceptualising this as essentially a disorder of the integrity of the self. (Mearns, 2004). His writings, including *The Metaphor of Play: Origin and Breakdown of Personal Being* (Mearns, 2005) and *The Poet's Voice in the Making of Mind* (Mearns, 2016) explore deeply the philosophical and psychological principles of the art and practice of relationships that are brought out by the conversational approach to the live expression and reception of emotions of hope and discovery in therapy.

### *Cognitive Analytic Therapy*

A similar relationally-based but more collaboratively pro-active and structured therapy, Cognitive-Analytic Therapy (CAT) developed by Anthony Ryle (1990), has proved highly effective in practice (Ryle, 1995; Ryle and Kerr 2002). Ryle worked initially as a doctor in general practice in London with large numbers of families suffering emotional distress. Together with colleagues seeking ways to support a new National Health Service with limited resources unable to cover expensive individual psychiatric treatment over long periods, he sought a more immediate response to emotional needs by listening and talking to patients, and he carried out an enquiry responsive to special psychodynamics of families in his care. He made considerable use of the 'personal constructs theory' of the psychologist, therapist and educator George Kelly who developed a comprehensive method of assessing individual characters and needs in social relations, the 'repertory grid' (Kelly, 1955).

Ryle developed a psychotherapy model – based largely on theories of object relations – but adapted psychoanalytic theory to incorporate the findings of the repertory grid and of early cognitive psychology to create a research project and a new practice of psychotherapy. This uses joint descriptions (reformulations) created by the therapist and patient to recognise and help control damaging ways of acting, and to guide the therapist to avoid reinforcing these patterns. This is undertaken in a constructive and collaborative enquiry with the patient who is encouraged to be an active participant in treatment. CAT aims to identify and work with problematic reciprocal roles (RRs) occurring *between* people in their emotional life together (including in therapy), as well as those earlier, internalised, formative reciprocal roles *within* the patient. Besides the epidemiological approach of Kelly, CAT is supported by the cultural and bio-social development theories and philosophy of language of Vygotsky and Bakhtin, and the constructs of the 'zone of proximal

development' and 'scaffolding' to explain competent mastery of learning and fluent communication in cooperative life. The reformulations, diagrammatic and written in letter form, are conceived of in CAT as Vygotskian 'psychological tools', which are used to enable a collaborative understanding, as well as narrative validation, of a patient's problems and their early relational origins, and also to work on revising them, in sometimes overtly 'practical' ways. In CAT, the 'Self' is seen as the underpinning 'organising construct' and to be fundamentally relationally-constituted. More complex, 'borderline' type, disorders are seen, as in the conversational model, and based on consideration of recent infant psychology, as essentially highly distressing, dissociative disorders of the Self, with resultant impairment of self-reflective capacity and of interpersonal function (Kerr et al. 2015).

### *Video Interaction Guidance*

In the mid 1980s, a psychologist Harrie Biemans in the Netherlands and a team of colleagues were searching for more effective approaches to child welfare practice. They were inspired by the findings of descriptive research on the emotional communication between infants and their mothers, and how the mother's responsiveness to her baby's initiatives developed intersubjectivity, or shared understanding, as the basis for communication, interaction and learning.

Biemans extended these principles to achieve success with a group of youth in a residential facility in the Netherlands by study of video recordings of interactions and the use of video feedback to develop awareness of subtleties of interaction (Van Rees, S. and Biemans, H. 1986; Biemans, 1990). The methodology has evolved from an application developed by SPIN (an Association for the Promotion of Intensive Home Training in the Netherlands) created to direct service to families, and adopted in many countries as Video Home Training (VHT), to a second application for all other settings, called Video Interaction Guidance (VIG) (Kennedy, Landor and Todd, 2011). This has proved effective in improving teachers' communication with pupils in schools, in assisting shared experience with people with special educational needs, such as autism, and in strengthening working groups of many kinds (Trevarthen, 2011c).

### *The Boston Change Process Study Group (BCPSG)*

The BCPSG was created in 1995 by a small group of practicing psychoanalysts, developmentalists, and analytic theorists, to promote

discussion of how recent developmental studies as well as dynamic systems theory can be used to understand and model the process of change in normal development and in psychoanalytic therapies (Stern et al, 1998; Boston Process Change Study Group, 2010). It is motivated by a conviction that, in the light of the new knowledge of how the infant observed in natural engagements regulates intimate affective engagements in collaboration with a parent, psychoanalytic developmental theories are in need of drastic revision. Following this understanding, the group has set out to explore in depth how knowledge of developmental process could creatively inform psychoanalytic therapies and understanding of change in treatment.

This project for a new psychotherapy is more recent than the others I have considered, but it has the closest relationship with the path-finding work on the perceptual abilities of infants and their use in affective regulations of mother-infant communication in which Daniel Stern was a leader in the 1970s. In 1971, aged 37, he was Chairman of the Department of Developmental Physiology of the Department of Psychiatry, College of Physicians and Surgeons, Columbia University and New York State Psychiatric Institute, and beginning psychoanalytic training at Columbia. That year he published in the *Journal of the American Academy of Child Psychiatry* in 1971 a paper entitled 'A micro-analysis of mother-infant interaction: Behaviors regulating social contact between a mother and her three-and-a-half-month-old twins'. He discovered dynamic patterns of expressive movement that were coordinated between the mother and her infants to communicate interests and emotions, and he proved that efforts of the mother which appeared to be controlling the infant were in fact also controlled by how the infant acted towards her. Stern began to seriously question the theory that the infant's emotional self is 'constructed' by maternal actions. He also became intensely interested in experimental studies that were proving infants had more intelligent control over their actions and awareness than had been assumed.

When fifteen years later Stern summarized the fruits of a new approach to understand the infant as a developing person with natural social intelligence in *The Interpersonal World of the Infant* he wrote these words in the Preface: 'This book attempts to create a dialogue between the infant as revealed by the experimental approach and as clinically constructed, in the sense of resolving the contradiction between theory and reality.' (Stern, 1985, p. ix, reproduced in the 2000 edition on page viii). In referring to 'the experimental approach' he is not giving

full credit for the knowledge gained by observation of spontaneous behaviours measured by microanalysis of spontaneous activities recorded on video. What happened was not compatible with the infant 'clinically constructed' by psychoanalytic interview.

For the rest of his life Stern was developing a new understanding of the innate dynamics of human body movement and the power of their rhythms and affective attunements in interpersonal communication. And this work culminated in a brilliant synthesis entitled *Forms of Vitality: Exploring Dynamic Experience in Psychology, the Arts, Psychotherapy and Development* (Stern, 2010). In the practice of the BCPSG, critical moments that arise in clinical treatment of patients who have trouble controlling their anxieties and emotional responses to perceived threats offer a therapist 'moments of meeting' in the rhythmic flow of attentive communication, which can bring 'a new way of being with the other', and change the implicit story, without explicit interpretation (Stern et al., 1998, 1999).

Whilst recognising this position as of fundamental importance, and of effective therapy, Ryle, from a CAT perspective, has cautioned that in addition, for more damaged patients, explicit collaborative reformulation of presenting problems and their relational origins may also be necessary, as well as more proactive assistance with changing and revising unhelpful patterns of coping and of interpersonal relating ( Ryle 2003).

## Conclusion: A New Way to Understand Both Intimate Relationships of Attachment and the Companionship of Cultural Awareness as a Meaningful Self-In-Relations Has Profound Implications for Appreciation of Mental Health and Well-Being

By carefully observing rhythms of movement and their purposes we have gained a wealth of scientific evidence confirming that we are born with mastery over the vitality dynamics of what our own complex bodies can do, and with an innate ability to share these with expressions of vitality in other persons. The motor skills of a newborn baby animate affectionate attachments with loving parents, and they cry for care and comfort to protect their vitality. The newborn can also show a playful sense of pleasure with smiles at 'moments of meeting' that promise adventurous companionship. This develops as musical proto-conversations composed in intimacy.



In the next few months a seductive playfulness flourishes, and by three or four months it draws attention from growing curiosity about the 'objective' world, which may be looked at and handled, to joy with companions in games that become favourite rituals.

The transition from self-conscious play with friends to the end of the first year where things people use become conventional tools leads to games as tasks that combine objects according to rules. In the second year the baby becomes a toddler, who is beginning to be attracted to words that name meanings in a common sense of what the world affords for sharing (Trevarthen and Delafield-Butt, 2015).

When asked to summarise these changing motives by VIG therapists I came up with the description of the developmental plan as LOVE comes before PLAY, which is followed by WORK (Trevarthen, 2011c). I now see it as describing the contrast between Freud's 'personal unconscious' and Jung's 'collective unconscious' (Trevarthen, 2005, 2013). Collective feelings are implicit or artful urges that direct the growth of a human consciousness that becomes more articulate and explicit or effective, and that may become distressed and alone in elaborate self-related thinking conceived as a defence.

Early in childhood, before mastery of language, a child shows interest and pride in performance of rituals that known companions appreciate as meaningful, and shyness or shame when faced with an unknown person who does not 'understand'. Shared meaning depends on a different set of affections and enjoyments from those of 'attachment' expressed as love for those who give care and who are 'cared for'.

The different forms of relational therapy attend to both intimate and communal affections, recognizing that the feelings of implicit awareness of others' presence and sympathy cover a great range between passionate attachment to proud satisfaction in enjoyment of collective symbolic creations, the ceremonial habits and language of our culture revealed by Geertz and Turner. There is a developmental process that guides the elaboration beyond infancy. Erik Erikson (1950, 1968) traced 'Ego' development and the changes of moral emotions in relationships, postulating a number of stages beyond a mother's protection from confusion in infancy, through early childhood, adolescence, maturity and old age.

These stages of the maturation of the self-in-relations are clarified by Brazelton's identification of 'touch points' where changes occur in collaboration and trust between individuals, or between organisations

and their management (Lester and Sparrow, 2010). They explain why therapies to support regaining of confidence and confiding and enabling of psychological healing need to attend to both the sympathetic feelings of personal affections in family relations of the past and present and the personal stories about them. They also need to attend to the responsible and rewarding participation of human actors in a complex collaborative world where each has to find a role with pride in others' recognition and appreciation.

Collectively these, by now detailed and extensive, understandings of the quintessentially relational character of early human development illuminate a new perspective on the convivial life of the human spirit and helpfully challenge current, dominant, highly individualistic and mechanistic conceptualisations of mental health and well-being, and, correspondingly, all therapeutic approaches that rely on them. □

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