



Centre Culturel International de
Cerisy-la-Salle
Cerisy-la-Salle, Normandie
“L’Empathie”
18-25 Juin, 2011

Innocence et Sympathie du Bébé:
Les Emotions - Dans le Corps, Vers Objets,
Avec Personnes – Racines d’Empathie?
Prof. Colwyn Trevarthen,
Department of Psychology, University of Edinburgh, Scotland

PERCEPTION, MOVEMENT
& ACTION RESEARCH
CENTRE (PMARC)  INSTITUTE FOR MUSIC IN
HUMAN & SOCIAL
DEVELOPMENT (IMHSD)




**The Apple in Eden:
How Do We Share
Meaning
Before Words?**


Infant psychology teaches us that *knowledge is shared creativity in movement, with sentiments of interest, affection, and pride.*

Titian – “The Fall of Adam” 1570. At 92 years of age, Titian sent this painting to the Spanish Court

Japanese Boy, 10 Months Old,
With His Mother, Appreciating Her Performance
With an Ironic Laugh, and Bowing to Request a Song

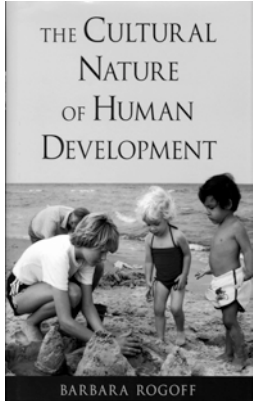


RICH IN MEANING




A proud, healthy family in a remote forest in Canada. Sampson and Leah Beaver with their daughter Frances Louise in 1907. As Blackfoot Indians they lived with little technical culture, not even using canoes. They are close to nature, rich in art, and very fit.

THE CULTURAL NATURE OF HUMAN DEVELOPMENT



Children gain knowledge in different social worlds, by ‘collaborative learning’, making imaginary and meaningful things in companionship with good teachers, who share intentions, feelings and ideas generously.

Barbara Rogoff is Prof. of Child Development, at UC Santa Cruz in California.



Weaving Generations Together
Evolving Creativity in the Maya of Chiapas

Patricia Marks Greenfield

How little girls in Mexico learn to weave. (They call school ‘paper learning’)



Three-year-old Rosy Xulubte' beats down a warp thread, leaning into her backstrap - a real loom.



Aunt, 10y., makes heddle for Rosy. Others are involved, too.
A Community of Learners

"It is by **NATURAL SIGNS** chiefly that we give **force and energy to language**; and the less language has of them, it is the less expressive and persuasive." (p. 106-107).
 "ARTIFICIAL SIGNS signify, but they do not express; they speak to the understanding, as algebraical characters may do, but *the passions, the affections, and the will, hear them not: these continue dormant and inactive, till we speak to them in the language of nature, to which they are all attention and obedience.*" (p. 108).

Reid, T. (1764). *An Inquiry into the Human Mind on the Principles of Common Sense*. Edinburgh.

FELT AND HEARD FEELINGS

Music and Dance cultivate **human motives for action and affective time in movement**, *for their own sake.*

They make stories from the **Natural Language** of the body – *from inside the human spirit, in the time of its life, conveying sentiments, in the body, and with persons.*

THEY GIVE MEANING TO THINGS SEEN
OUTSIDE, IN THE WORLD

"Culture is activity of thought, and **receptiveness to beauty and humane feeling.**

Scraps of information have nothing to do with it."

Whitehead, A. N. (1929).
The Aims of Education & Other Essays,
(New York: Macmillan).

Young children, under school age, are eager to take part in creating, learning and evaluating meaning, as long as it is part of **life in companionship** -- that is, when it is performing actions that are **shared joyfully**, making things that others think are **useful, interesting and beautiful.**



Cameron House Nursery School, Edinburgh (With permission of the Head Mistress)



THE CHILD'S CURRICULUM
 'What is the Value of Early Childhood Education and Care?'

www.childscurriculum.org.uk
 Royal College of Physicians of Edinburgh
 Saturday 1st September 2010

In Association With
 EARLY EDUCATION

INSTITUTE FOR MUSIC IN HUMAN AND SOCIAL DEVELOPMENT (IMHSD)

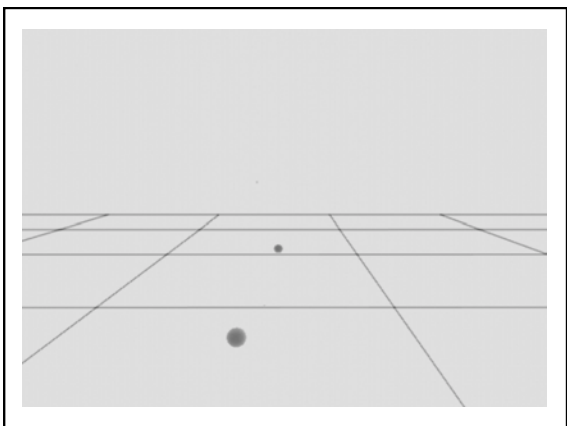
University of Strathclyde Glasgow

The Human Spirit
 and Its Sentiments


IN the Body,
 FOR Objects,
 WITH People

OBJECTS IN MOTION CAN COME TO LIFE
 Here are two objects recorded by 'motion capture' in a 3D space. **What do their motions convey to you?**

Is their motion just physical?
Are they alive – moving with vitality?
Are they aware or intelligent?
Are there two of them, separately active?
Are they communicating, socially?
Do they show changing emotions?
Are they showing signs of sympathy?
Could they be telling a story?



HERE ARE THE ACTORS IN THAT STORY

Baby Bailey is male, and one week premature.

*Red marker, left arm;
 Green right arm*

He was born 2 weeks before term at the Edinburgh Royal Infirmary of by induced labour. Mother and baby were being discharged at time of recording, 1 week later.

HOW DID THE SELF BECOME A COMMUNITY?

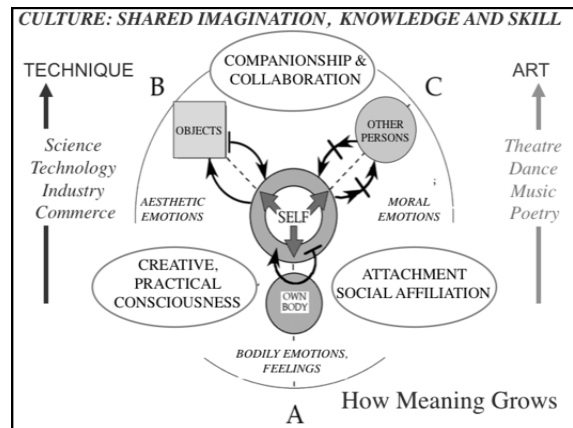
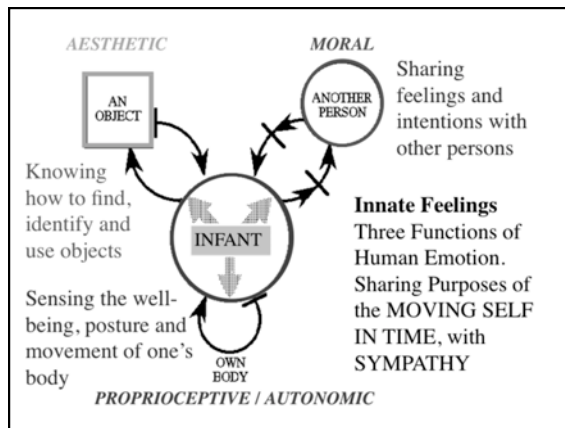
“The nature of the self has been one of the central problems in philosophy and most recently in neuroscience. Here, we suggest that animals and humans share a ‘core self’ represented in homologous underlying neural networks. We argue that the core self might be constituted by an integrative neuronal mechanism that enables self-related processing (SRP).” [With rhythmic vitality]

Georg Northoff and Jaak Panksepp (2008). The trans-species concept of self and the subcortical–cortical midline system *Trends in Cognitive Sciences*, 12(7), 259-264.

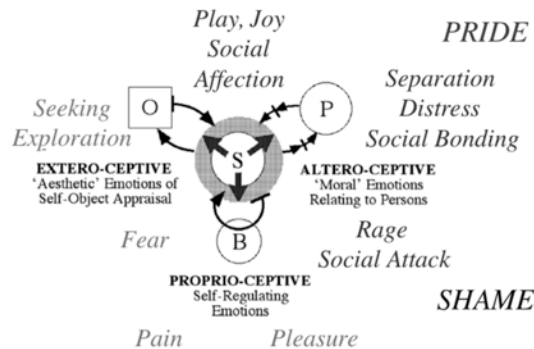
INNATE INTENTIONS
OF THE HUMAN SPIRIT

Motives for imaginative action, their emotions, and their sharing

Three kinds of **Experience**, Three **Uses of Moving** & Three ways of **Feeling**, can be distinguished in a Self -- and they are born in us **to be shared**.



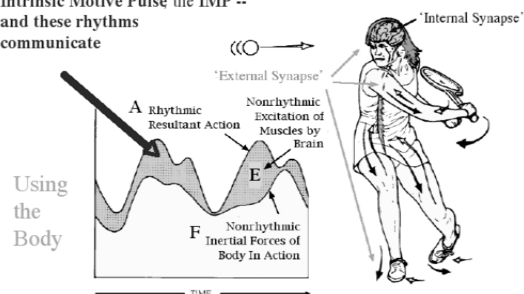
A MAP OF HUMAN MOTIVES AND EMOTIONS, IN THE WORLD AND IN RELATIONSHIPS



Cultural life requires both *aesthetic appreciation* of the values of objects and *moral engagement* with the life of other human beings, with hope to share meaning.

RHYTHMS OF BODY AND BRAIN

WHAT RHYTHM IN THE MIND IS FOR: The Brain Thinks, Imagines and Remembers in Time, With the Rhythms of an Intrinsic Motive Pulse the IMP -- and these rhythms communicate



Rhythmic movements result from predictive motor images generated in the brain to 'use' and 'feel' the forces of the periphery (Bernstein, 1967).

EFFICIENT FREE MOVEMENT HAS PACE,
FORM & TONE, LIKE MUSIC

'Musicality' may be defined as the human way of moving with Rhythm and a wealth of Expression --

It Creates Action of the Body with Emotion,
and It Communicates Stories of Purpose, Thought
and Feeling -- *Driven by Time in the Brain in a
CHRONOBIOLOGICAL SPECTRUM
OF RHYTHMS*

THE HIDDEN REALM OF
'VITALITY DYNAMICS':

Exploring Dynamic Experience and Vitality in
Psychology, Neuroscience, Development, and Art
Daniel N. Stern M. D.

Oxford University Press, 2010

Vitality dynamics are psychological,
subjective phenomena ... temporally
contoured movements that are initiated by
invisible felt forces ... **felt as aliveness.**

Consider the following list of words.

exploding	surging	accelerating
swelling	bursting	fading
drawn out	disappearing	fleeting
forceful	powerful	weak
cresting	pulsing	tentative
rushing	pulling	pushing
relaxing	languorous	floating
fluttering	effortful	easy
tense	gentle	halting
gliding	swinging	tightly
holding still	loosely	bounding

and many more.

The words are adverbs or adjectives. *They are not emotions or motivational states ... pure perceptions ... sensations -- they have no modality. They are not cognitions or acts, as they have no goal state and no specific means.*

They are *the felt experience of force – in movement – with a temporal contour - and a sense of aliveness. ... shapes of expressive movement.* They concern the **How**, the manner, the style, not the What nor the Why.

Vitality dynamics are the child of movement.

Movement is our primary experience and vitality dynamic experience is the most primitive and fundamental of all felt experience.

Babies' Movements have Innate Rhythm

The movements of a baby are paced by 'time in the mind' -- by 'neural clocks' that control the energy of actions in steps of time. This is the *Intrinsic Motive Pulse (IMP)* of the baby's animal nature.

Though sometimes chaotic with reflex 'corrections', the infant's movements show different 'vitality dynamics' -- of *urgency* or *peacefulness*, graceful *ease* or *tension*, *pleasure* or *displeasure*.

They are controlled by a **coherent, and powerfully communicative and sensitive flow of emotion.**

Expressing Human Vitality, seeking Sympathy

TIMES OF THE MIND AND OF MUSIC ARE INNATE

Basic rhythms, and their emotional qualities, are the same in infants and adults.

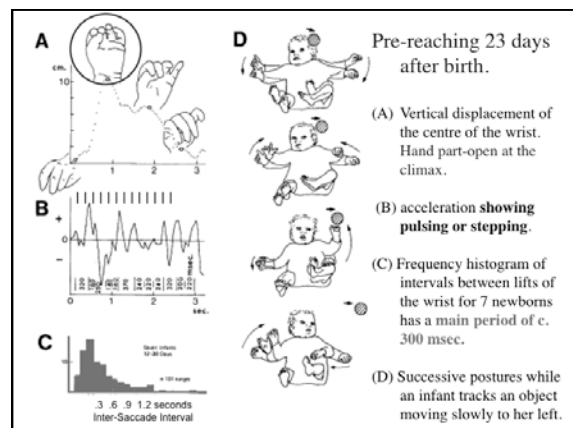
This makes communication of the shared vitality of *intentions*, *interests* and *feelings* possible, before 'facts' of shared knowledge about actions and objects are identified in speech.

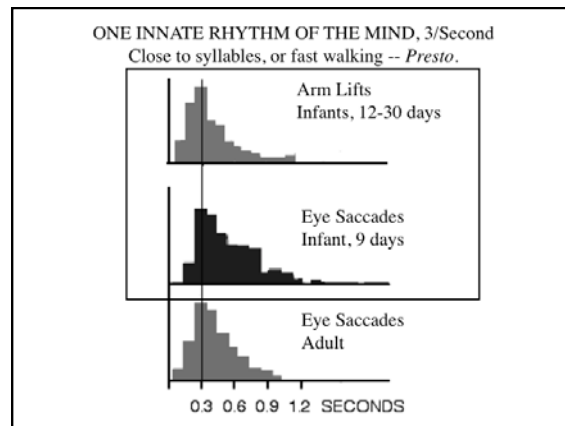
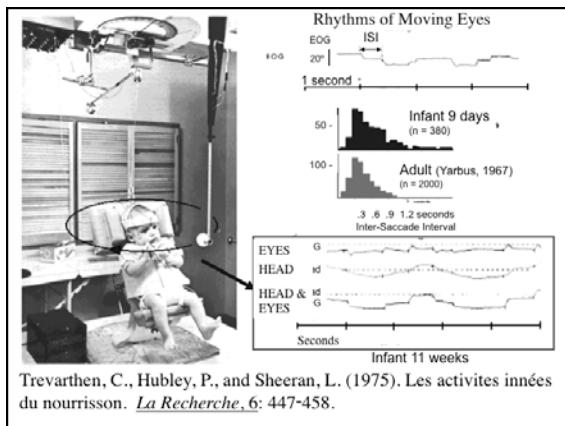
SHORTEST PERCEPTIBLE & CONTROLLABLE EVENTS

0.05 to 0.2 seconds

THE PRESENT MOMENT OF CONSCIOUS ACTING

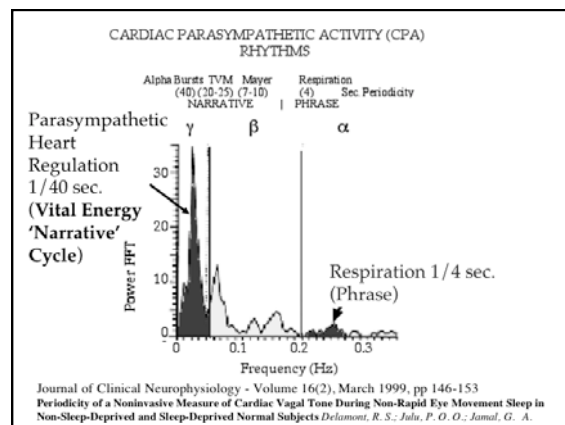
From 0.3 to 6 seconds





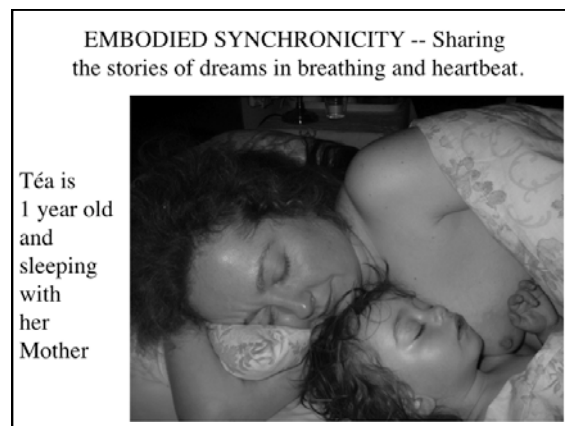
IMAGINED FUTURE & RECALLED PAST IN ACTION & THOUGHT (GENERATING & REGULATING MEMORIES & EXPECTATIONS)

From verses/stanzas of songs & performances, short narratives/stories, reasoned arguments, to plans of the day & lifetimes



The inside stories go on slowly when you are asleep, imagining and remembering, dreaming of acting and experiencing with feeling.

The rhythm of energy in the body can be shared in streams of intimate vitality, unconsciously.



Infants are much cleverer than we had thought at discriminating *musical rhythms and tones of human sounds, and appreciating a story*. They hear and learn musicality of mother's talk and simple tunes *before birth*.

A two-month-old can be a skilled performer in an *improvised vocal duet or protoconversation, a shared story over tens of seconds*.

A CHILD IS BORN WITH BODY & BRAIN READY TO MOVE IN COMPANY - MUSICALITY IS INNATE - IT CONDUCTS OUR MENTAL DRAMA & SHARES IT

A WONDERFUL EXAMPLE OF TRANSMODAL MEANING



Mors lilla Olle



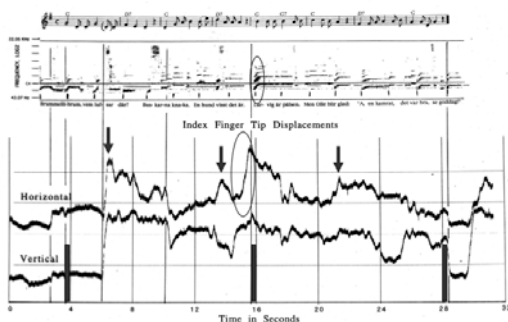
Stämmandet: Alice Tegnér
 Huru lilla Olle, hur lilla Olle!
 Huru lilla Olle, hur lilla Olle!
 Huru lilla Olle, hur lilla Olle!
 Huru lilla Olle, hur lilla Olle!

Mother's little Olle meets a bear and feeds him blueberries

A Swedish Mother Sings to Her Blind 5-Month-Old Daughter



How Maria shows us the shape of phrases and stories in song. This five-month old blind baby girl conducts her mother's songs with her left hand. Her hand moves 1/3 second before the melody of her mother's voice, making graceful gestures, telling a story she knows well.

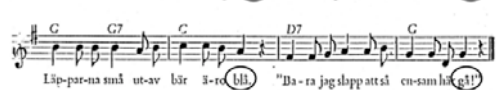


The baby's finger, dancing to the music, sometimes moves about 0.3 seconds before the mother's voice. At other times she synchronizes. She knows the 'performance'.

The Rhythms and Tones of a Story

Mors lilla Olle

Text och musik: Alice Tegnér

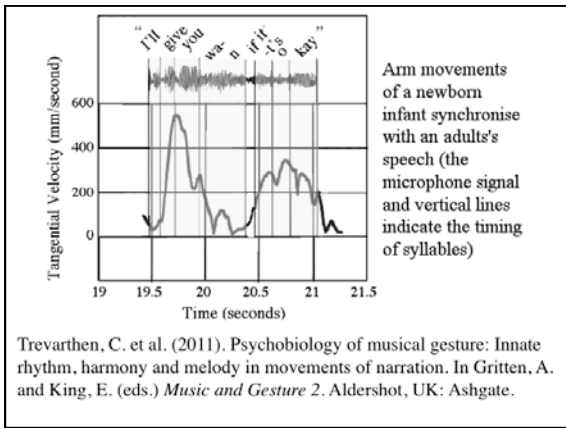
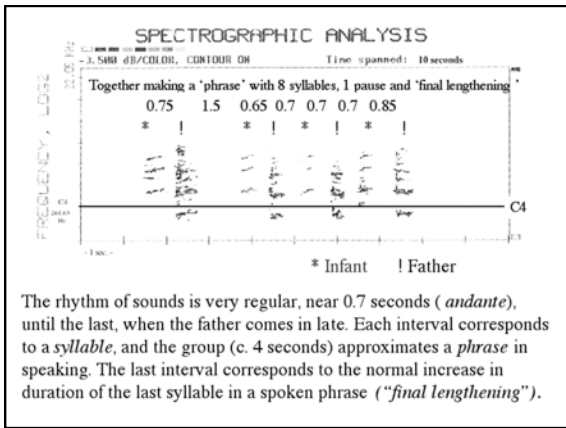
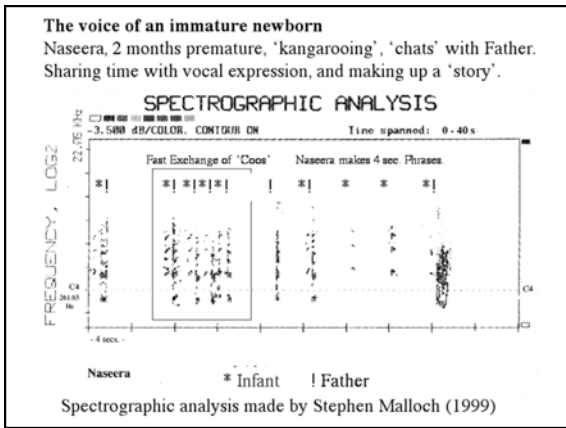


In the four verses of the song there are **eight different rhyming vowels**. A lesson in Swedish language.

Drummelibrum, vem lufsar **där**?
 Buskarna knaka. En hund visst det **är**.
 Lurvig är pälsen. Men Olle blir **glad**.
 »Å, en kamrat, det var bra, se goddags!**»**

Klappar så björnen med händer **små**
 räcker fram korgen: »Se där, smaka **på**!
 Nalle han slukar mest allt vad där **är**.
 »Hör du, jag tror, att du tycker om **brä**!**»**

Mor fick nu se dem, gav till ett **skri**.
 Björnen sprang bort, nu är leken **förbi**.
 »Å, varför skrämde du undan min **vän**?
 Mor lilla, bed honom komma **igen**!**»**



CHILDREN ARE BORN MUSICAL

They have the sensibilities of an adult musician without training in conventions of composition or skills of performance. They move in rhythmical ways and explore the tones and melodies of their voice, imitating the intonations and narratives of other persons' expressions long before being able to talk. And they love to perform for the attention and affective appraisal of others.

THE MUSIC AND DANCE OF SHARING
A TALE OF FOUR GENERATIONS



Music
Moves
Us Together
from Birth,
And the
Sharing
Brings Joy

Téa, 5, is dancing with her grandmother to French fiddle music played by her uncle, holding a doll made by her great grandmother

**Natural Communicative Musicality,
Expression of the Idea from 230 Years Ago**

"After the pleasures which arise from gratification of the bodily appetites, there seems to be none more natural to man than Music and Dancing.

In the progress of art and improvement they are, perhaps, the first and earliest pleasures of his own invention; for those which arise from the gratification of the bodily appetites cannot be said to be his own invention."

Adam Smith (1777/1982) Of the nature of that imitation which takes place in what are called the imitative arts. In, **Essays on Philosophical Subjects**,. (Ed. Wightman and Bryce;) **Indianapolis: Liberty Fund.**

**Music Moves Between Memory and Imagination
Making and Sharing Personal Narratives**

"Time and measure are to instrumental Music what order and method are to discourse; they break it into proper parts and divisions, by which we are enabled both to remember better what has gone before, and frequently to foresee somewhat of what is to come after: the enjoyment of Music arises partly from **memory** and partly from **foresight**."

Adam Smith, and again.

Melodies are Emotional Stories

"Without any imitation, instrumental Music can produce very considerable effects... : by the sweetness of its sounds it awakens agreeably, and calls upon the attention; by their connection and affinity it naturally detains that attention, which follows easily a series of agreeable sounds, which have all a certain relation both to a common, fundamental, or leading note, called the **key note**; and to a **certain succession or combination of notes, called the song or composition**."

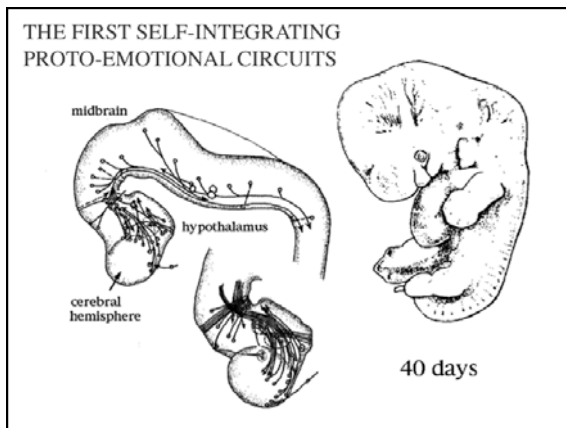
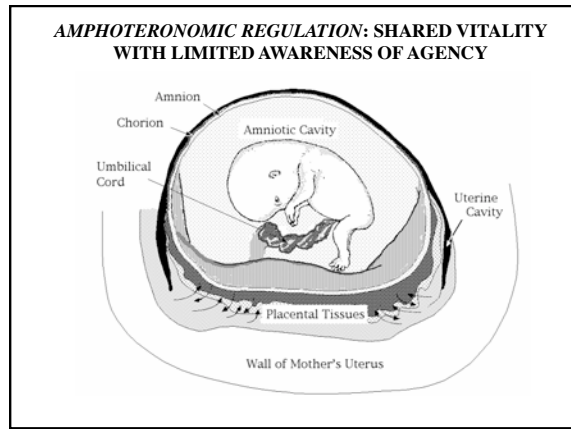
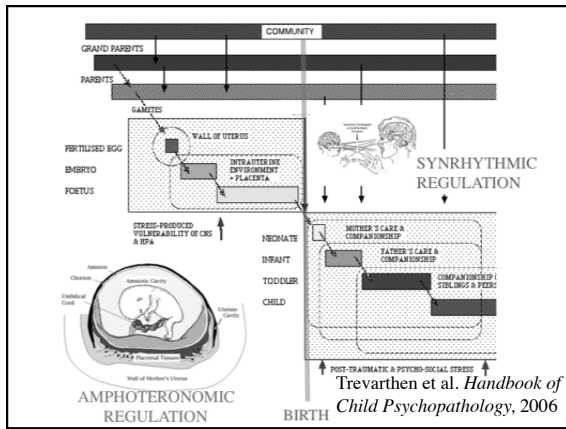
Adam Smith, loc. cit.

DEVELOPMENTS
BEFORE BIRTH

Anticipating Company
for the Spirit

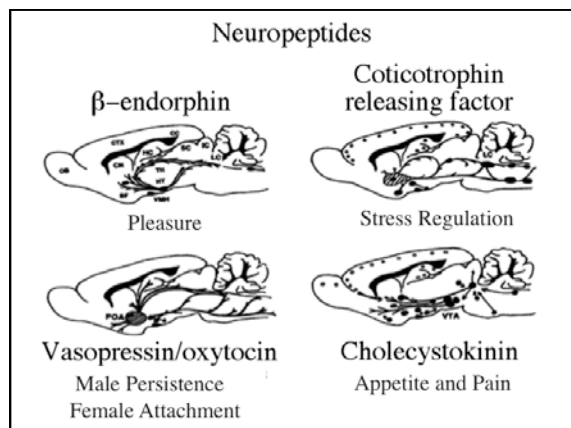
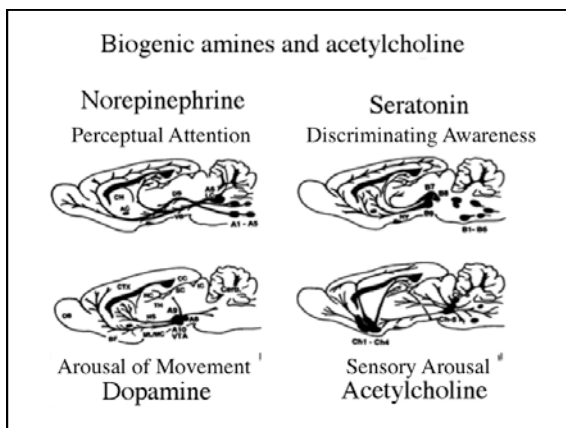
A Human Life begins in cooperation with a Mother's Life. It grows systems for coordinated **Intentional Activity** with **Prospective Awareness** regulated by **Emotions**, which are evolved to share the *rhythms and qualities of Vitality* after birth.

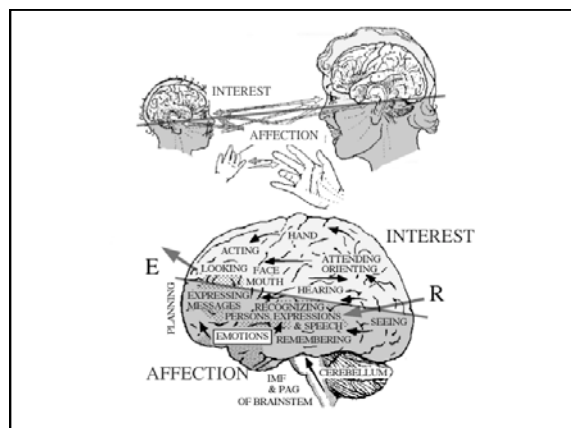
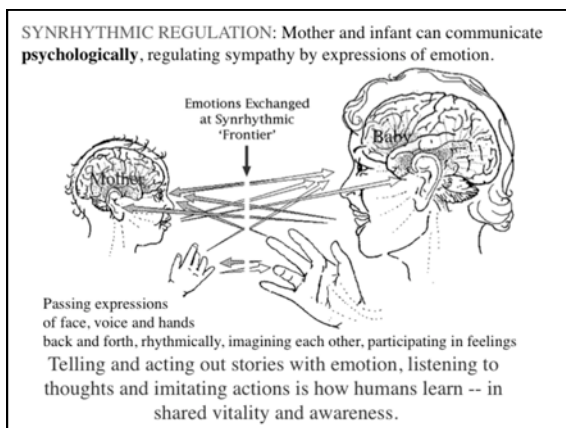
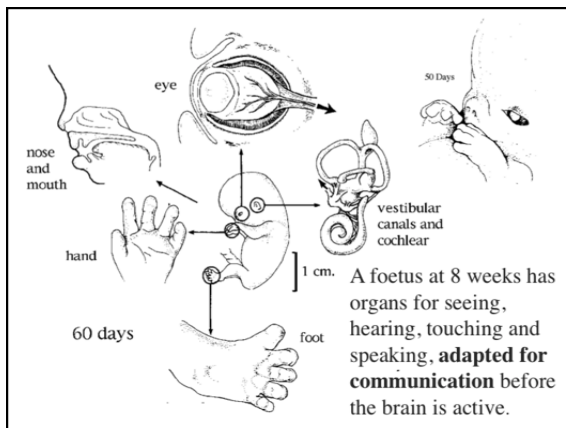
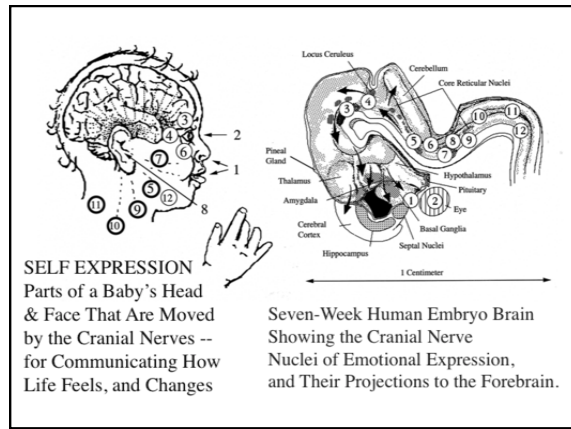
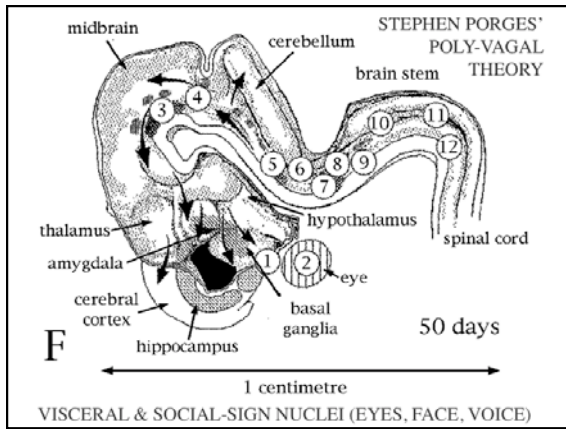
Human vitality is adapted to generate 'narratives' of action and awareness, in the future and for the past, which become *projects*, *problems*, and *propositions* that are shared to make meaningful life stories with companions.



The **neurochemistry of the emotions** in mammals has been studied in the rat brain by Jaak Panksepp.

Nerve cells that produce key transmitters are in the brain stem. They project into the cerebral cortex and cerebellum, regulating their actions.



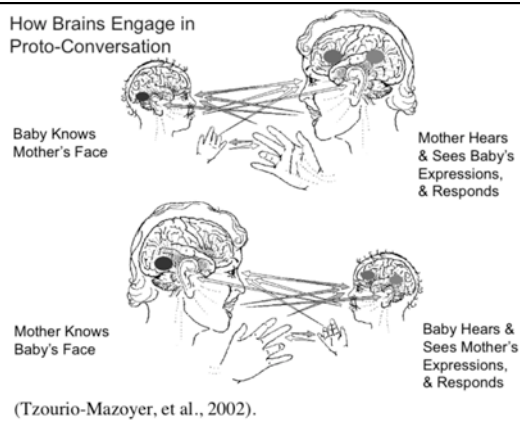


At birth the human brain is one third the size of an adult brain, *but it has all major parts in place, including unique human organs for communicating states of vitality and imagination.* The baby is listening, for care and cheerful company.

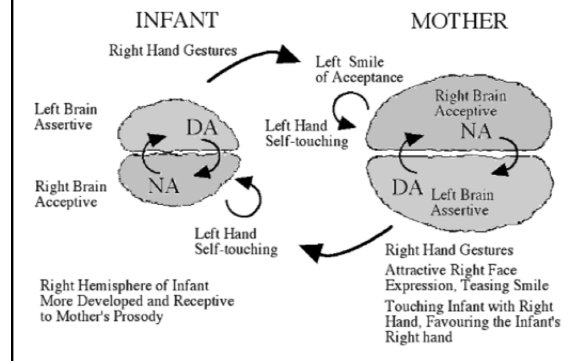


The parts of the cerebral cortex that grow most in childhood are those for cultural learning, and language, *but these parts are already adapted to their tasks in a young baby, and ready to engage with other persons' expressive behaviours.*

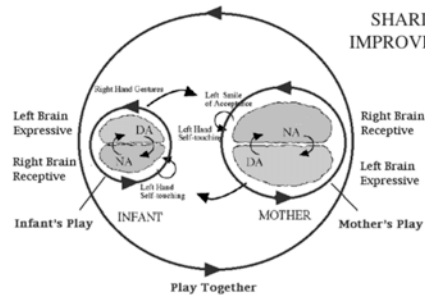
How Brains Engage in Proto-Conversation



ASYMMETRIES OF INTERSUBJECTIVITY



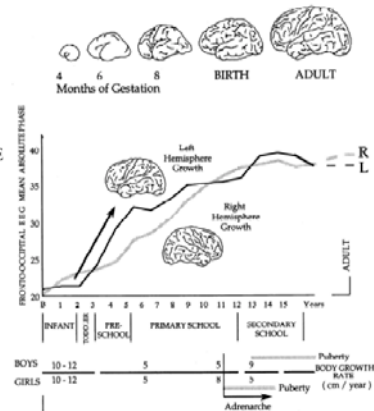
SHARING THE IMPROVISATION OF JOY

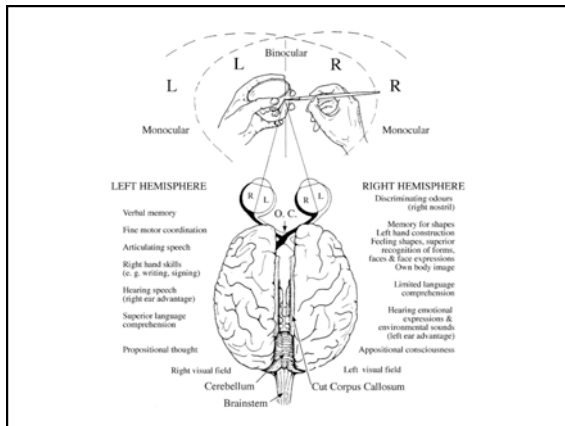


Inspired by an essay by Victor Turner (1983) on "Play and Drama", the 'liminal' motives of playfulness mediate between the *expressive* and *receptive* functions of the left and right systems of the brain -- both *within* the two individuals separately, and *between* the mother and her infant when they are creating fun in communication.

THE RIGHT HEMISPHERE DEVELOPS IN INFANCY.

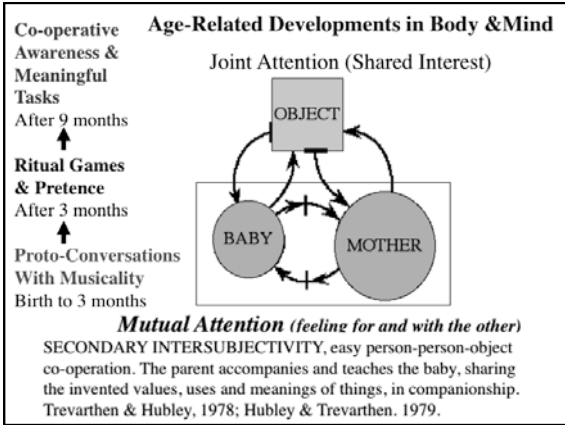
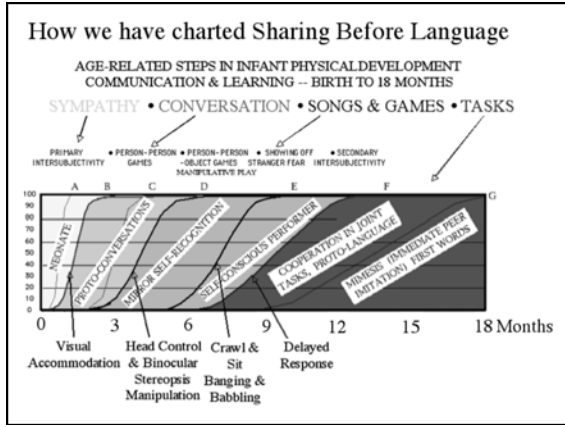
THE LEFT WITH LANGUAGE





THE INFANT IN COMMUNICATION

How Human Empathy Develops Before Language



A newborn infant looks and listens with innocent concentration for confirmation of human expressions, building knowledge of others' being.

The process of shared consciousness and story-making advances rapidly, *from the INTIMATE 'ritual courtesy' of protoconversations, to the INVENTIVE teasing fun of games, and then to cooperation in practical tasks and INFORMATIVE 'acts of meaning'* by which a common sense world learns to name its objects and actions with words.

(Later **IMPERATIVE** social customs are important)

“The old model of thinking of the newborn infant as helpless and ready to be shaped by his environment prevented us from seeing his power as a communicant in the early mother-father-infant interaction. To see the neonate as chaotic or insensitive provided us with the capacity to see ourselves as acting 'on' rather than 'with' him.”

T.Berry Brazelton, 1979, in Bullowa, *Before Speech*

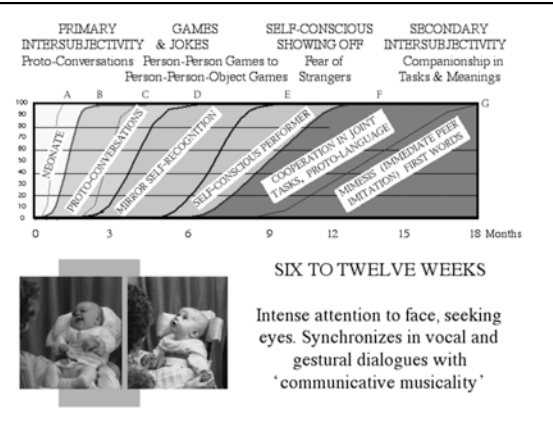
Music, as songs and games, cultivates motives and emotions of shared movement, then language is learned to name items of common experience. **MARY CATHERINE BATESON'S DISCOVERY** in *Bullock Before Speech*, 1979
 "A study of these sequences established that the mother and infant were collaborating in a pattern of more or less alternating, nonoverlapping 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'.**" -- *continued*

THE SHARED VITALITY OF PROTO-CONVERSATION

... "The study of timing and sequencing showed that certainly the mother and probably the infant, in addition to conforming in general to a regular pattern, were acting to sustain it or to restore it when it faltered, waiting for the expected vocalization from the other and then after a pause resuming vocalization, as if to elicit a response that had not been forthcoming. These interactions were characterized by *a sort of delighted, ritualized courtesy and more or less sustained attention and mutual gaze.*" ... *continued*

MOTIVES FOR CULTURAL LEARNING, IN INFANT AND MOTHER

... "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. *The development of the capacity for participation in complex sequenced behavior* must lay the groundwork for participation in games and for the development of *playful patterns of imitations*, and so the study of such performances can shed light on a variety of types of learning, including language acquisition."



IN EARLY WEEKS A BABY SEEKS INTIMATE CHATS

At 7 weeks Téa is very Interested in communicating.



THE BABY LEADS THE DANCE OF INTERSUBJECTIVITY

Jody, 9 weeks old, and his mother at the Center for Cognitive Studies, Harvard University, 1969



Research Project on Infant Communication with Prof. Jerome Bruner, Dr. T. Berry Brazelton and Dr. Martin Richards

We tell one another our intentions, interests and feelings from birth, by **moving in sympathy** -- creating stories of life with people we love.



The Prosser Family in Edinburgh, 1979

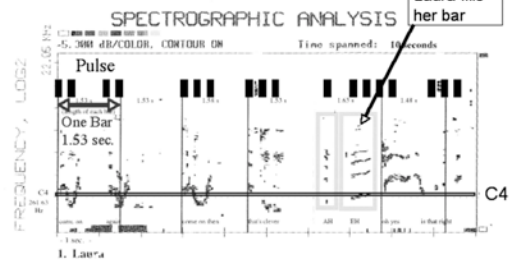
Laura, at 6 weeks, starts to chat with her Mother, Kay, at Edinburgh University. She pays attention.



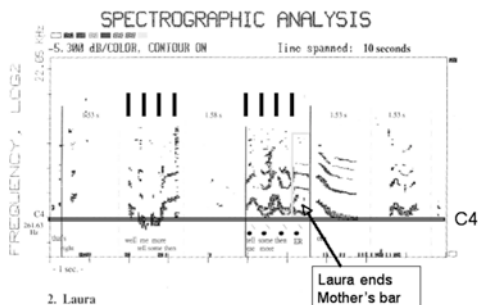
THE BODY SHOWS INTIMATE INTENTIONS
Laura, 6 weeks old, and her mother, Edinburgh University, 1979



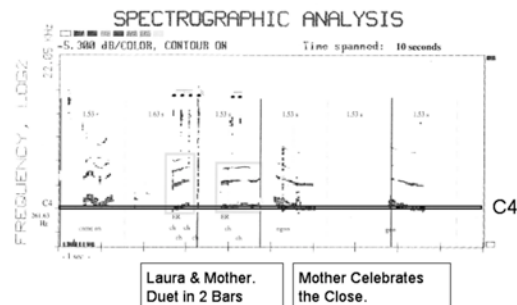
Stephen Malloch, a musician and acoustics expert, listened carefully to their Sounds of Affectionate Interest. He discovered the Communicative Musicality of Laura's and her Mother's Protoconversation -- a Story in Sound.



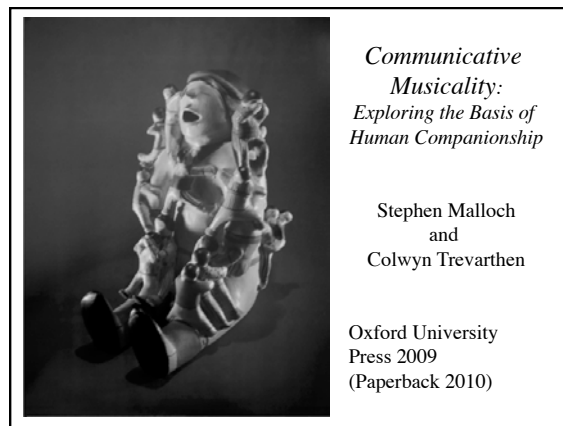
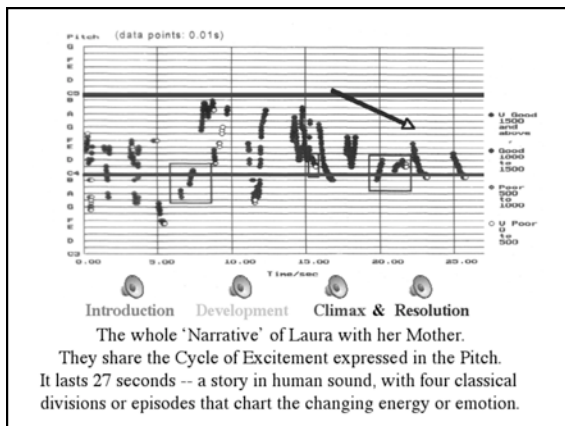
First 10 seconds of a short 'story': 'Introduction'.



10 to 20 seconds, 'Development'



20 to 30 seconds, from 'Climax. to 'Resolution'.



COMMUNICATIVE MUSICALITY
(Malloch, 1999)

Music communicates because it engages an **Intrinsic Motive Pulse (IMP)** in the brain.

The sense of 'musicality' comprises:

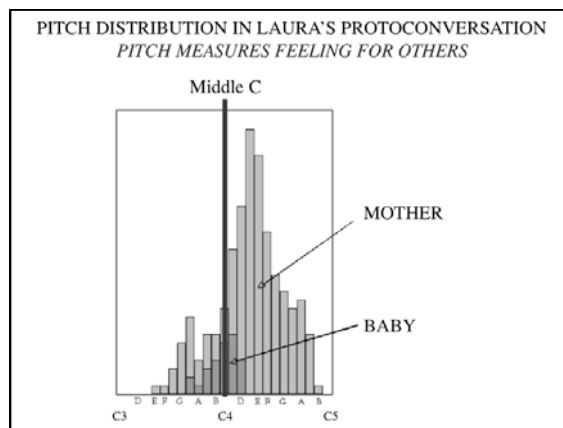
- (1) **PULSE**: A rhythmic time sense (syllables, the beat, phrases and longer elements);
- (2) **QUALITY**: Sensitivity for the temporal variation in intensity, pitch and timbre of voices and of instruments that mimic the human voice;
- (3) **NARRATIVE**: Perception of the emotional development of the melodic line, which supports anticipation of repeating harmonies, phrases and emotional forms in a vocal or musical performance.

Narrative

- Pulse and Quality are combined in the forms of emotional narrative, **which allow two persons to share a sense of purpose in passing time.**

Stephen Malloch (1999).

The proto-conversational story becomes a life story in the family, by socio-noesis.

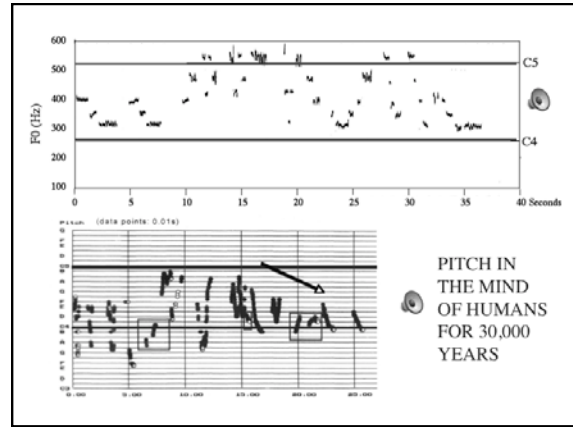




<http://news.bbc.co.uk/2/hi/science/nature/8117915.stm>

Scientists in Germany describe flutes dating back to the time that modern humans began colonising Europe, 35,000 years ago. They are the oldest musical instruments found to date.

The researchers say that music was widespread in pre-historic times. It may have been one of a suite of behaviours displayed by our own species which helped give them an edge over the Neanderthals.



NEWBORNS ARE EXPRESSIVE



A Musician's Daughter, 6 Hours Old

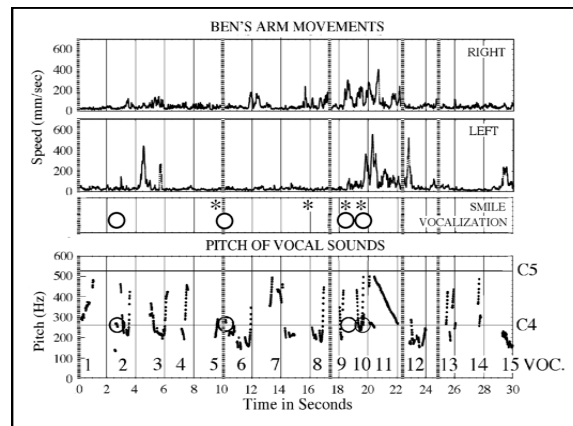
Edinburgh Royal Infirmary

Neonatal Perception-Action

Neonatal Unit Studio

Parent-infant motion, video, and audio capture:

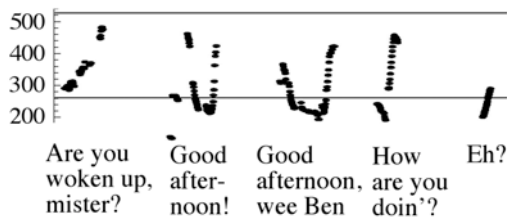
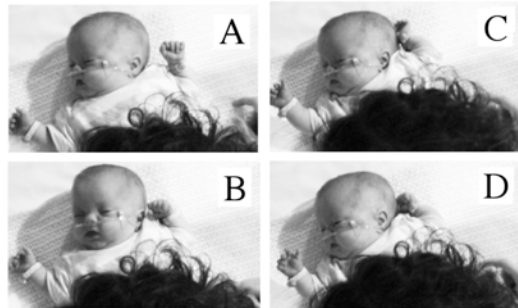
- 500Hz Qualisys
- Digital video
- Digital audio



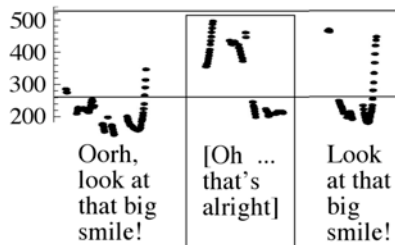
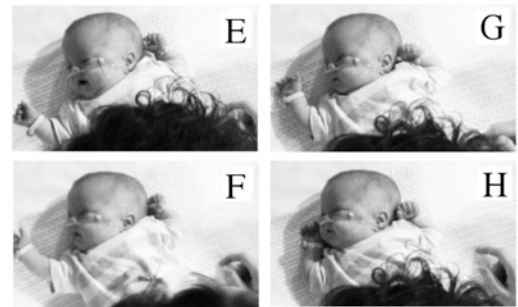
Mother's speech follows the narrative actions

INTRODUCTION [ATTENTIVE]	CLIMAX [LIVELY/ENGAGED]
1 - Are you woken up, mister?	9 - Hi Ya!
2 - Good afternoon!	10 - Hello there!
3 - Good afternoon, wee Ben	11 - <i>Kiss and Glide</i>
4 - How are you doin'?	
5 - Eh?	RESOLUTION [REFLECTIVE]
	12 - Oh, you're kicking your Mom!
DEVELOPMENT [RESPONSIVE]	[DISENGAGED]
6 - Oorh, look at that big smile!	13 - Are you kickin' me?
7 - [Oh ... <i>That's all great</i>]	14 - Eh?
8 - Look at that big smile	15 - Have a big wriggle, then

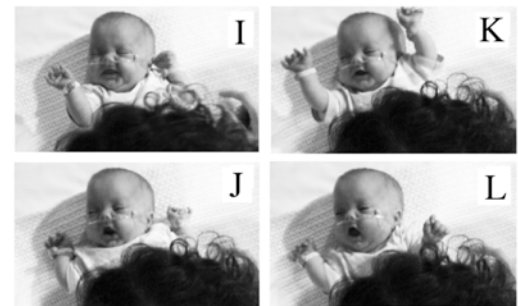
INTRODUCTION

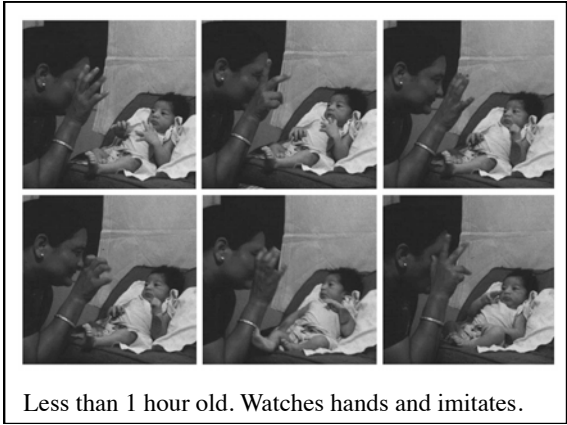
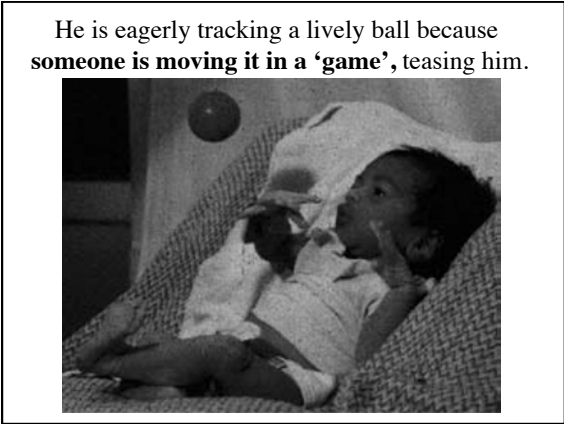
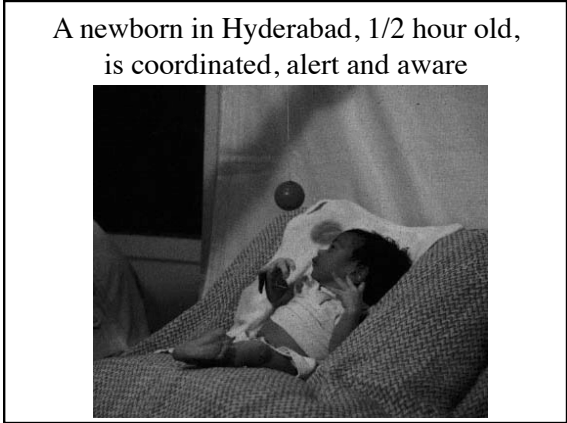
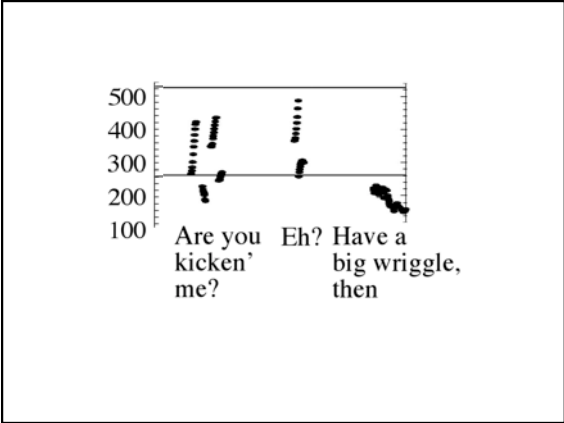
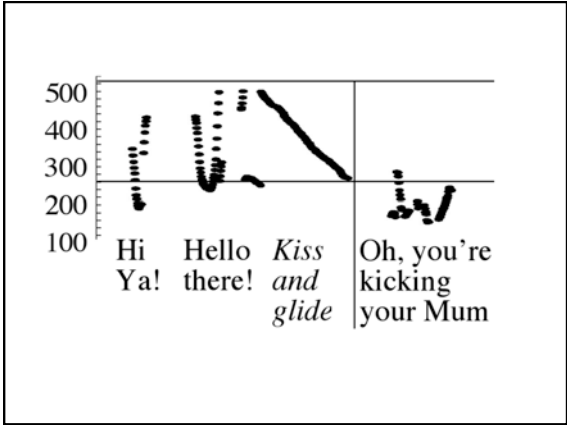
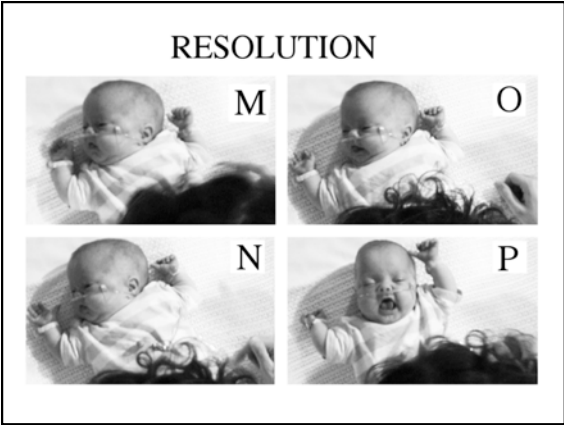


DEVELOPMENT



CLIMAX





NEWBORNS ARE EXPRESSIVE



A Musician's Daughter, 6 Hours Old

MOTHER AND
BABY READY
FOR
A CHAT

Newborn Shamini
and her Mother, Vasu
(Prof. Vasudevi Reddy,
Department of Psychology,
Portsmouth University)



At 30 mins. old, Shamini imitates
mouth opening and tongue protrusion.



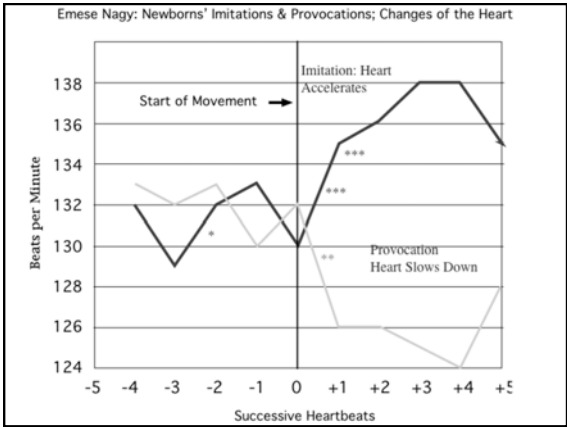
Newborns can be *provocative*
in a dialogue of imitations
regulated by **their** interest,
determination and pleasure.

NEONATAL IMITATION IS FOR TWO: Research
of Dr. Emese Nagy in Szeged, Hungary, with Newborns



Two fingers – experimenter





15 seconds of dialogue
with a baby less than 2 days old



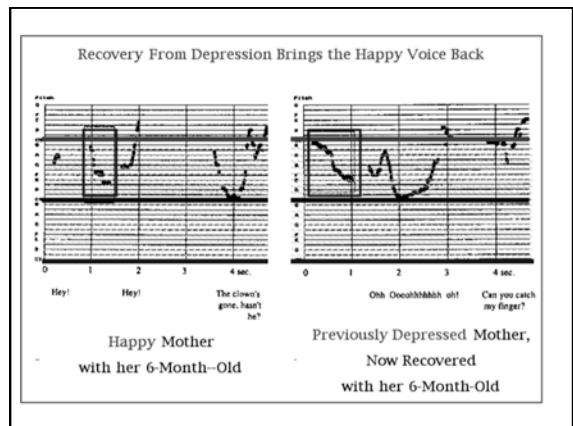
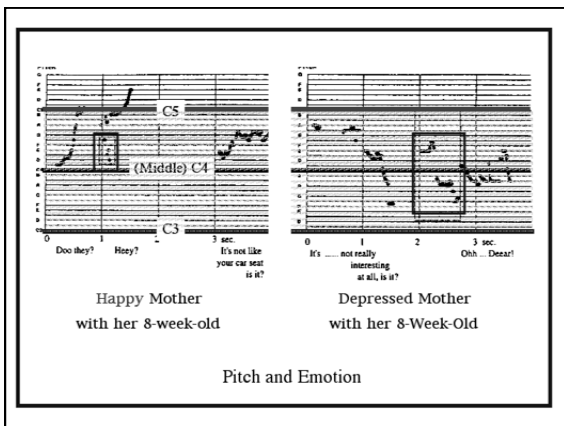




**DEPRESSED MOTHERS
LOSE MUSICALITY -- THEY
CANNOT SHARE MOTIVES AND
FEELINGS**

When they talk with their infants, taking part in adventures of action and of thought is more difficult for both.

The baby may become depressed, too.

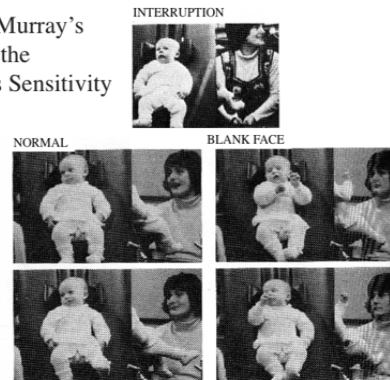


WHEN THE RHYTHM OF VITALITY IS NOT SHARED, JOYFUL INTIMACY BECOMES DISTRESS

Babies detect when the rhythm is wrong. They express their sadness at loss of 'contingency' -- when 'out of touch' in the dance.

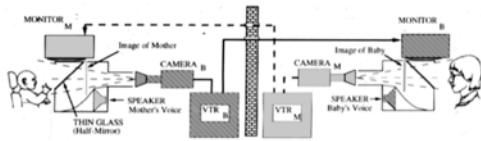
Researches of Prof. **Lynne Murray** at Reading University, and Dr. **Maya Gratier** in Paris, have explored how the mother-infant dyad is affected when interpersonal timing is disturbed, experimentally, or by illness.

Lynne Murray's Test of the Infant's Sensitivity --1975



(Trevarthen, Hubley and Sheeran, Scientific Foundations of Paediatrics, 1981)

Lynne Murray's Double Television Replay Test



Baby Shona, 8 Weeks, in one Room,
Her Mother in Another.
They See, and Hear, Each Other on Television

Shona cannot find her mother's face



She gets a fright when the microphones squeal
What's that noise? Oh! That's horrible!



Shona's mother shows a 'sympathetic' emotion
"Oh dear, I don't want to see a pouty face!"



The noise is corrected and she sees her mother
There you are!



“That’s better!”



What a funny mother!



What’s going on in your head?



What I have to say.



“Silly, billy girl!”



You make me laugh!



A happy baby in contact after one minute of play
(No comment)



REPLAY: The happy minute of Shona's mother is
replayed. Shona is out of touch, withdrawn,
and sad when mother is just a recording



The same moment in the mother's TV behaviour.
Live and in communication. **Replay**. Avoidant.



LIVE



REPLAY

The happy
minute of
Shona's
mother is
replayed.

Shona is out
of touch,
withdrawn,
and sad
if mother is
just a
recording

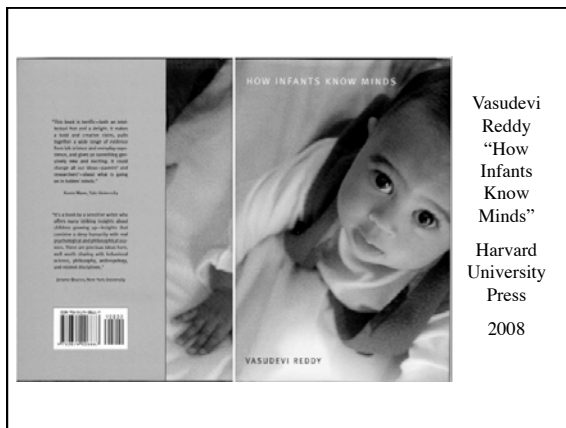
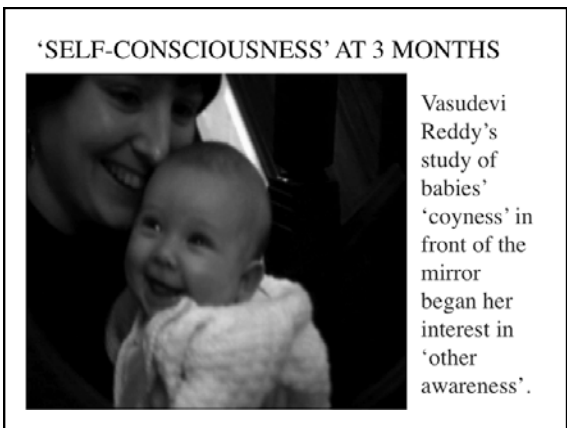
GAMES & RITUALS,
WITH PEOPLE
AND WITH THINGS

Person-Person,
with a performer's pretence
then
Person-Person-Object with 'toys'.



After 3 months, a baby quickly becomes stronger, more curious, eager to look at surroundings, and to grasp and manipulate things.

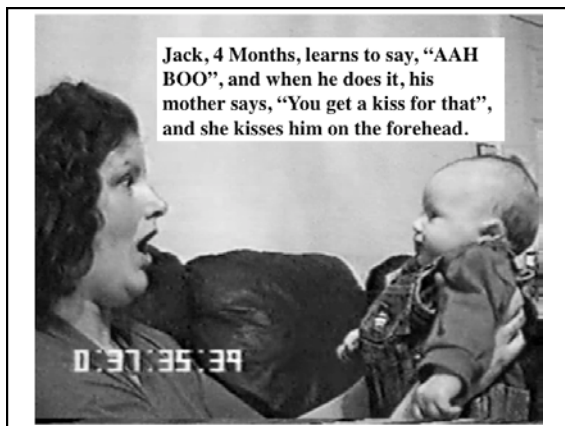
There is a growing tension between doing something for oneself, or with others -- and this makes for **self-consciousness, teasing and fun, and invention of games**. (This is why the infant begins to find mirrors interesting -- they tease expectations of communication)



A mother and all the family become more lively. They start playing **rhythmic body games**, and enjoy **music, songs and dancing** which become part of the fun of their life together.

They are sharing their **special rituals and dramas**, feeling them intimately in their bodies and minds, and remembering them in a **'proto-culture'**.

They negotiate the invented life of meaning.



Research on **songs for infants** in many languages has taught us how we share **story-telling** underneath, or beyond, the spoken word -- in the body.

The infant's rhythmical feelings can be mirrored and modified by song and instrumental music.

Responses to music prove that the organized **rhythm and melody catch a baby's attention** and move him or her to dancing in time with hands and legs.

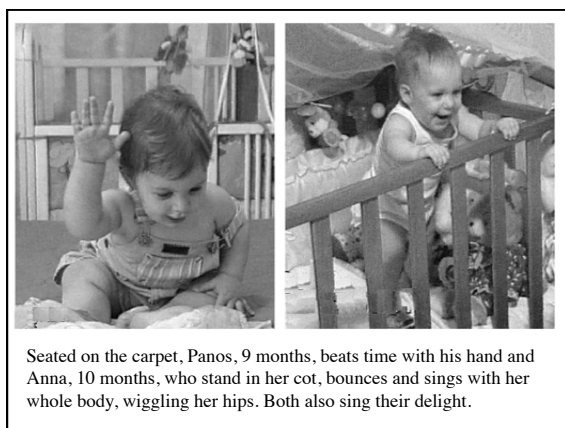
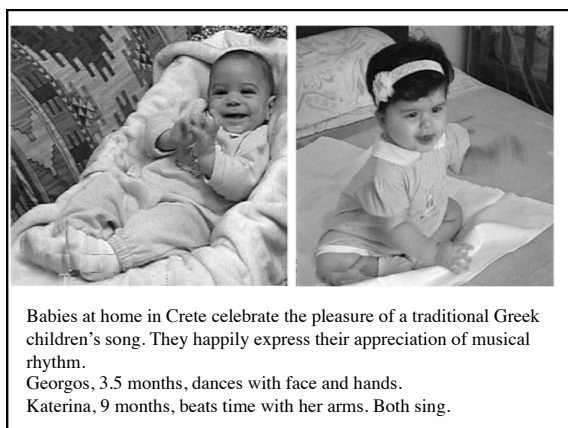
Songs are quickly learned and remembered. They become favourite messages of friendship, **emblems of the infant's identity, or membership of a group.**

MUSICAL COMPANIONSHIP

The rhythm and expression of music carries *a message of human company*, the friendly 'Other', telling a moving narrative, giving fresh human purpose to time in the mind.

Music teacher and psychologist Dr. **Katerina Mazokopaki** has studied the development of rhythmic talents of babies in Crete.

Mazokopaki, K. & Kugiumtzakis, G. (2008). Infant rhythms: Expressions of musical companionship. In Malloch, S. & Trevarthen, C. (Eds.) Communicative Musicality: Narratives of expressive gesture and being human, 185-208. Oxford: Oxford University Press.



THE STORY IN A CLASSIC BABY-SONG

Rock a bye baby, When the wind When the bough Down will come
on the tree (top) blows, breaks, baby,
the cradle will (rock) the cradle will (fall) cradle and (all)

INTRODUCTION • DEVELOPMENT • CLIMAX • RESOLUTION

A FAVOURITE ACTION SONG

Round and round the gar-den,

• ‘ • • ‘ • •

Ran a ted-dy bear,

• ‘ • ‘ • -

One step, two step,

• • • •

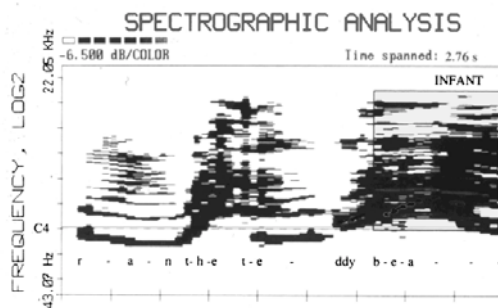
Tic-kl-y un-der **there**.

• ‘ ‘ • ‘ • -

Leanne, 5 months. “Round and round the garden”,
with *Interest* and *Pleasure*.



BABY SYNCHRONISES WITH MOTHER ON
THE LAST VOWEL, MATCHING HER PITCH



Megan, “Round and round the garden”



“-- and a tickly under there!”



A POPULAR SCOTTISH CLAPPING STORY

Clappa, clappa handies,

• ‘ • • ‘ • •

Mommy’s at the well,

• ‘ • • ‘ • -

Daddy’s away to Hamilton,

• ‘ • ‘ • • ‘ •

To buy wee Megan a bell.

• ‘ • ‘ • • ‘ •

Megan, 5 months, "Clappa-clappa-handies"



Emma, 6 months: Looking at self, touching Mother's tongue
Her pride is marked by the circles.



Clapping hands with shared joy; imitating, watching own tongue

Emma, 6 months: "Clap Handies!" (She is left-handed).



Emma, 6 months,
On father's knee.

Her mother says,
"Clap handies!"

Emma 'shows' or
'performs'
to the camera,
with intent look
and a proud grin.

(Photo © John and Penelope Hubley, 1979)

That's pride!



But, With a Stranger she is worried and 'Ashamed'
-- He does not 'get it'.



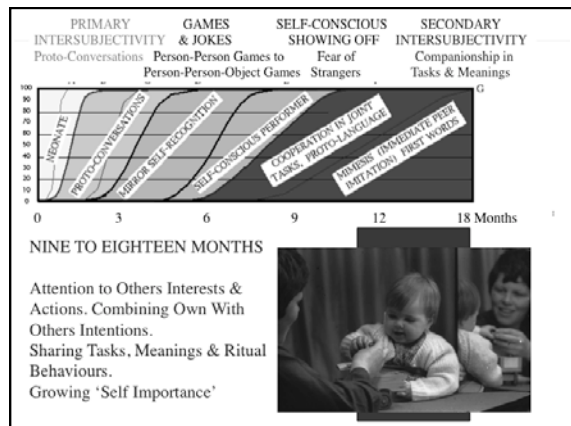
Even a nice stranger is hard for a 10-month-old to bear.



And Mother gets told off!

DEVELOPMENT OF COOPERATING IN TASKS

Beginning to share the endless game of cultural jobs to do, and tools to do them.

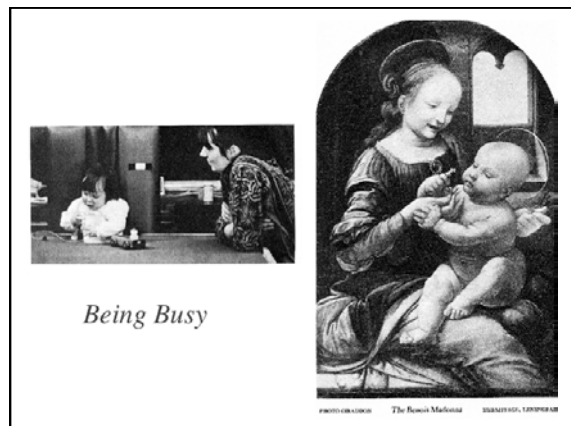


Secondary Intersubjectivity, Sharing Tasks In Friendship = 'Cultural Learning'

At about 9 months a change in the infant's motives and interests begins **cooperative practical learning**.

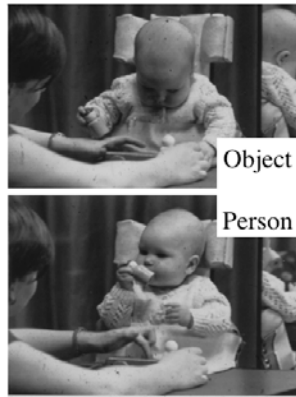
The baby's curiosity about what other people are doing, and the things they use, leads to **following directives, trying to make conventional messages and trying to use objects -- as tools -- doing things in the proper way.**

This is vital preparation for learning language to name meanings. **Language is built in shared action.**





"Master Baby" by Sir William Orchardson, Scottish National Gallery. A one-year-old with her mother. Person-Person-Object Game.



BEFORE 9 MONTHS
TWO ATTENTIONS

*"Put the man in
the truck!"*

Emma, 7 months
Is bright, but she
doesn't get her
mother's message.
**She is too young to
share the purpose
of a task.**

*"Don't chew it.
Put it in there!"*

For Basilie, 12 months, it is easy and amusing.

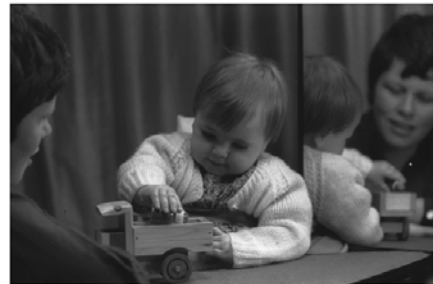
"OK, If that's what you want me to do."



"Here, put this one in the truck!"

No problem!

"Easy!"



"Happy?"



"Oh, what a clever girl!" (Yes I am good, aren't I)



Basilie pointed and
vocalised a
'protolanguage'
request for the
magazine.
Her mother said,
"Oh, she recognizes
the *National
Geographic* by
its yellow cover, and
likes to look at the
pictures."

Sharing meaningful things with a best friend



Children Are Story Sharing Creatures, From Birth
That is why a book and a telephone bill are both
interesting for a one-year-old in Edinburgh.

Adegbenro, Lagos, like to play his piano with his mother.



(Photo © John and Penelope Hubley, 1979)

Mother and uncle in Adegbenro's *Zone of Proximal Development*.



(Photos © John and Penelope Hubley, 1979)

But Adegbenro is a capable and proud performer on his own.



(Photo © John and Penelope Hubley, 1979)

Adegbenro asks for
his favourite rattle.



His mother gives it to him.



(Photos © John and Penelope Hubley, 1979)



"Look what I've got!"
Mother smiles.

(Photo © John and Penelope Hubley, 1979)

Abstract: For conference on *Empathy*: Ceresy la Salle, June 2011

Colwyn Trevarthen

***Innate Sympathy: How Infants Show Emotional Appraisal of Others
As Partners In Rhythms of Agency and Awareness.***

I will review evidence on the natural development of emotions in infancy, and their sharing in intimate rhythmic encounters with identified persons. I will distinguish various functions of innate affects through the first year of life: for regulating dynamic vital states of the body, for aesthetic apprehension of objects and learning their uses by body movements, and for moral regulation of cooperative action and playful rivalry in sharing intentions and meanings with companions. I will discuss the limitations of current theories of imitative 'reactions' of empathy, and their dependence on 'interpretations' of other persons' expressions, and on a 'theory of mind' and 'mentalizing'. My account will support the 18th Century theory of Adam Smith concerning motives of innate sympathy leading to the intuitive learning of self-conscious and self-critical habits for cooperative moral sentiments, and Darwin's 19th Century theory of the evolution of emotions. I will propose that current information on activities of systems in the brain that correlate with experience of emotional states or feelings in other individuals is not evidence for 'empathy' to 'enter into' emotions of others, but supports a different theory of the biological function of actively shared affective states, and how they have evolved as qualities of movement in expectation of communication to serve cooperative intentions and the sharing and evaluating of narratives of experience. Sympathetic regulation of rhythms and narrations of relationships is a foundation for *intimate* family life and development of self-confidence in relationships, for *inventive* discovery of artful experience in a community, for *informative* communication in mastery of technical cooperations, and for acceptance of *instructive* principles to ensure harmony in society and its more formal rituals. Language is a late player in this game of shared expressive movement, and has musical/poetic precursors.

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Trevarthen, C. & Gratier, M. (2005). Voix et Musicalité: Nature, Emotion, Relations et Culture. In, M.-F. Castasède and G. Konopczynski (eds.) *Au Commencement Était la Voix*. Ramonville Saint-Agne: Érès, pp. 105-116.

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