



Dialogic Development of Infants

Turns as basic patterns of the dialogue in the parent-infant-dyad

Research Project Horsch et al.

First of all I would like to thank Prof. Aili Helenius

- for inviting us (Frau Roth and me) to Rauma and Turku.
- for sharing scientific experiences with me since a couple of years.
- for cooperating with me.

Yesterday we started into a new period. The cooperation contract was signed by the rectors of the universities of Turku and Heidelberg.

In this way, new perspectives are given for our students and the scientific staff.

I am really glad about this important step.

I wanted to tell you this, Aili, before we start the exchange of our scientific experience.

Thank you for everything!

Now, I would like to present our research project *Dialogic Development of Infants.*

Turns as basic patterns of the dialogue in the parent-infant-dyad.

We are, above all, interested in the development of Turns between parents and infants.

Some aspects of the theoretical background:

From the very first day of life parents are in close contact with their child and introduce both - other people and the world- to their newborn in a mutually dialogic way.

Proceeding hand in hand they pass on basic dialogic competences.



Our research project “Dialogic Development of Infants” addresses the broad dialogic development of parents and infants within the first 18 months of life.

First of all, I want to explain what we mean when we talk about dialogues between parents and infants.

What is dialogical in the relationship between parents and infant?

What is dialogical?

- to listen to the infant,
- to see him as a partner,
- to wait for his offers,
- to take the infant seriously,
- to practice turn-taking,
- to negotiate,
- to share emotions with him ...

In this way they enter the dialogue.

Entering the Dialogue

- What do we know about the dialogic competences of infants?
- What do we know about the dialogic competences of parents?
- What do we know about the development of these competences?
- When does the dialogue start ?

We developed the following questions:

Questions posed in our study:

- *What signals do parents /infants send*
- *How do parents/infants respond ?*
- *When do parents /infants refuse to respond?*
- *Which differences can be found within the groups?*

Our objective is to describe the preverbal dialogues.

How do they look like?



Who starts the dialogue?

Is the infant a dialogue partner from the beginning?

Particular emphasis will be placed on the dialogic elements:

- *greeting behaviours*
- *vocalisation of the infant*
- *motherese/fatherese*
- *Dialogic Echo of the parents*
- *eye-contact*

Methods

The empirical data is derived from a longitudinal study within the first 18 months of the infant's life.

The data is collected monthly by video recording in the natural setting.

Participants worldwide n= 266

Participants in Poland

Participants in the United States

Participants in Germany

Some data of the parent-infant-groups in Germany:

Participants Germany total: n= 111

- normally developing infants n=73
- infants with hearing loss n=12
- preemies n=18
- infants with Down-Syndrome n=8

Computerized analyses (*interact Mangold*) are used for the evaluation of the data.

I will present the interact programme later.

We study correlations among variables e.g. vocalisation and Dialogic Echo of the parents.



This is, perhaps, an appropriate point to look at a video clip. I will show you a video clip concerning the Dialogic Echo.

What is the Dialogic Echo? [VIDEO1]

What could you “hear” in this clip?

- the vocalisation of the infant (aged 6 months)
- the Dialogic Echo of the mother

In our opinion, the Dialogic Echo is always the answer. That means, it's the the child who starts the dialogue.

I will show you in the next slide.

Analysis of Vocalisation and Dialogic Echo

What can we see?

- A normally developing child; Age 3 months
- A child with hearing loss; Age: 3 months after implantation :

The first interact file demonstrates the vocalisation and Dialogic Echo of a normally developing infant. The duration is 15 seconds.

We see that the child starts and the father answers and the child answers again.

Father and infant sustain the dialogue. We can see the turn-takings.]

Compared with the infant with cochlear-implant differences can be found in the number and duration of the infants vocalisation. But nevertheless, both stay in dialogue. They show turn-taking.

What happens within the first months of life – here – the first 9 months, concerning **Vocalisation and Dialogic Echo (n=10):**

A high rate of vocalisation and Dialogic Echo in the first month of life has to be stated.

Parents are waiting. They respond contingently the infant's vocalisation.

We have a peak again in the age of 8 months. It seems to be an important step for the language development. Protowords appear.



***What do we know about the dialogic element
greeting behaviour?***

The dialogic element of greeting behaviour (parents)

- smiles,
- moves head up and down
- opens eyes widely
- says something e.g. hello, hello
- face to face dialogue
- eye-contact

How does the child answer?

- gets into eye-contact
- is fully concentrated
- listens
- stops/starts its' movements
- starts vocalisation

⇒ ***The dialogue starts***

[VIDEO 2]

The age of the infant is 14 weeks.

For me, it is one of the best video clips concerning the greeting behaviour even if you can't hear what they are telling each other [Pointer].

The results demonstrate a negative correlation of greeting behaviour with the Dialogic Echo ($r = -0.30$) and the infant's vocalisations ($r = -0.34$).

Parents use more greeting behaviours and less Dialogic Echo when the infant vocalises less.



Furthermore the greeting behaviours correlate with the use of motherese / fatherese ($r=0.87$). This correlation is highly significant ($p= 0.0051^{***}$).

Another significant correlation exists between the infant's vocalisation and the Dialogic Echo ($r= 0.82$; $p=0.0126$).

The results demonstrate the development of the dialogic abilities of parents and children.

It is important for us, to demonstrate the infant's competency.

The results demonstrate the infant's competency to enter the dialogue and to respond to certain dialogic offers.

What are our perspectives?

Parallel to the development of dialogic elements we analyse the contents of important formats between parents and infants.

Important formats between parents and infant are (e.g.):

looking into picture books,

finger playing,

singing together,

playing peekaboo...

Are there correlations between

a higher rate of certain dialogic elements, certain formats and the education?

Are formats with a higher rate of dialogic elements more helpful for the development of the infant (social,cognitive,emotional)?



Are parents who use more dialogic elements more interested in the education of their infants?

It would be of interest to demonstrate the correlation of dialogic elements and education or - as we say- (in German) the correlation of dialogic elements and „Bildung“.

It is important to know these facts for the understanding of early educational processes.

It could be important for a common research project.

Thank you for your attention!