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The Washing-Smooth Hole-Fish

**and other findings of semantic potential and negotiation strategies
in conversation with congenitally deafblind children**

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1. INTRODUCTION

Imagine yourself in a dark room - no light at all stimulates your visual sense. Add a silence so deep that not even the sounds of your own body flicker the small receptive hairs in your cochlea. Then imagine that you have no language, no inner monologue to keep your mind on track with sanity. Now, from no perceivable place somewhere in this darkness and silence, strange things occur as if by magic, something touches you – briefly or lingering – only to disappear again into utter nothingness. Only the traces of remembered touch are left on your body and in your mind. This is the world of congenitally deafblind children, as one might imagine it to be. How on earth can a brain and body, so isolated and under-stimulated, develop into a sane mind, not to consider a communicating subject with a sense of social interaction? Nevertheless, astonishing examples of deafblind children developing something like “normal” language skills have been reported. The famous example of Helen Keller is one of such rare children – none of which, it must be confessed, were deafblind from birth – who by a laborious effort on behalf of both child and adult partners acquired the skills provided for social interaction in a culture of this highly communicative species, called human kind. Inspired by these few stories from the early research in deafblind children, researchers in the field of congenital deafblindness (hereafter cdb) have for some years now tried to make way into the “silent and dark abyss” of the minds of these cdb children. They have made great progress in engaging cdb children in meaningful interaction, and this has paved the way for investigations in the cognitive basis these children develop on which to build some kind of language acquisition. Maybe the world of cdb children is not as one might imagine. Maybe it is not a dark silent abyss. This thesis will attempt to add evidence to the notion that it is NOT. It will attempt to give some explanations to “how on earth” these children can develop along the same lines as “normal” hearing and seeing children.

1.1. *What came before*

I will not use up a lot of space here to lay out the historical facts of deafblind research until now, as this has already been done by Regi Theodor Enerstvedt (1996), Knut Johansen (1999), and Anne Nafstad (1999) but merely sketch out the main milestones. Nafstad (1999) describes the development of the education of cdb people as highly

dependant on the social construction of them and the theoretical approach to education. She divides the history of cdb education into three eras:

First, the “Old Times” where teachers were heroes saving the captured saint-like deafblind children by giving them the wor(l)d (p.20ff). It is from this period that we have the “astonishing examples” of Helen Keller, Olga Skorokhodova, Laura Bridgman, Julia Brace, etc. (c.f. Enertsvedt 1996 pp.235-279).

The second era was the “Modern Times” where an idealistic belief in One All-embracing Theory lead to an impersonal and behavioristic approach to cdb education, but where the idealism at the same time secured a growing interest and funding from the Nordic states (c.f. Enertsvedt 1996 pp.280-330).

Finally, what Nafstad labels “the Postmodern Times” provided a more humanistic and attentive approach to the individual cdb child’s emotional and developmental specificities. This has led to a readiness for a “... radical social constructional and theoretically informed redefinition of both the “word” and the “world”...”(Nafstad 1999 p.31).

On the 27. of February 2003 Anne Nafstad presented some aspects of her present field of research at a research meeting at the Center for Semiotics in Aarhus, Denmark. Nafstad presented an analysis from her huge corpus of video recordings, documenting the progresses made in the understanding of how to communicate with cdb children. Based on this presentation and the following discussion I decided to aim this M.A. thesis at the analysis of aspects of such “difficult texts”, as these video sequences seemed to me.

Nafstad’s visit at the Center for Semiotics is an example of the growing interest within cdb research towards a semiotic and linguistic understanding of interactions with cdb children. Especially the international organisation *Deafblind International* (hereafter DbI) via its subdivision *Working Group on Communication* (hereafter DbIWGC) - of which Anne Nafstad is an active member - and the *Nordic Staff Training Center for Deafblind Services*¹ (hereafter NUD) have shown a great deal of interest in these approaches to communication, by inviting semioticians and linguists to their

¹ Nordisk Uddannelsescenter for Døvblindepersonale, Dronninglund, Denmark.

seminars², and actively seeking collaboration partners among these. Furthermore, a growing interest from within the fields of linguistics and semiotics toward the special problems concerning cdb communication nurtures the soil for a fruitful collaboration between cdb researchers and those of us concerned specifically with language and signs.³

The thesis is written as a direct response to the above-mentioned request for “a theoretically informed re-definition of the “word” and the “world”” of the cdb children. It is written mainly within the framework of DbIWGC’s and more specifically Nafstad’s research, and therefore I will shortly present the main results that have paved the way to the current state of affairs.

The first project (hosted by Skådalen⁴ and NUD) investigated the *Attachment regulation* of cdb children from the point of view that it is an extreme variant of the attachment regulation of hearing and seeing children. The goal was to make interventions that could support this attachment (Nafstad 1989, Nafstad 1992, and Nafstad & Rødbroe 1999).

When this problem was solved, the next project (NUD and DbIWGC) aimed at the problem of *re-establishing face to face relation*. This project was based on Nadel & Pezé’s (1993) findings on *immediate imitation*. This project showed that the three factors co-regulation of social interaction, co-regulation of proximity and distance, and co-regulation of exploration were fundamental prerequisites for the development of potentially communicative expressions (DbIWGC 1996, Nafstad 1993, and Nafstad & Rødbroe 1999).

The current project – at which the present thesis aims itself – continues the research on how spontaneous gestures are negotiated into communicative signs, and how the communication may be sustained. At present, experimental interventions based

² As a recent example of this serves a seminar held by DbIWGC under the title *Semiotics and Communication*, at NUD May 1st and 2nd 2003, where the speakers were Jacques Souriau, Anne Nafstad (both from the field of cdb research), Per Aage Brandt, and Flemming Ask Larsen (from Center for Semiotics in Aarhus). C.f. likewise DbI’s international courses in Suresness which are documented in the publications: *Actes de Cours International*, Suresness (1996) and (1999).

³ C.f. the work of Per Aage Brandt, Arnfinn M. Vonen, and Thomas Luckmann. Other fields: From the perspective of evolutionary psychology Merlin Donald (2001:232ff.) tries to account for the implications of the case Helen Keller for language and consciousness studies. From within the field of social science David Goode (1994) has examined the communication of cdb in order to give an account of the problems with the social construction of cdb children.

⁴ Skådalen Resourcesenter, Oslo, Norway.

on cognitive linguistic theory are undertaken and evaluated via video based analyses. The positive contribution of these interventions to the development of symbolic communicative competence has been documented, and some of the problems the adult partners are faced with in the communication with the cdb children have been pointed out (NUD 2000, Nafstad & Vonen 2000, Vonen & Nafstad 1999 and DbIWGC 1999b).

1.2. A cognitive semiotic approach

My interest in this field is driven by a lurking suspicion that the analysis of cdb communication might reveal some of the unsolved mysteries about human language in general. A closer look on how these children and their partners manage to develop means for communication might tell us something about what it is in the human brain/mind that makes us the best communicating animal on this planet. It might give new insights into what language is. This thesis will try to address some of these questions. It will thus rather be a thesis of posing questions, than one of giving answers; one of hypothesis, rather than conclusions; and one of proposals, rather than solutions. It will be an attempt to set up some prospects for future integration of the research on deafblind communication and the analytic approach provided by cognitive semiotics. Questions relevant for both the field of deafblind research and for cognitive science in general will be posed, and a few examples of analysis will be provided as first attempts of a semiotic analysis of some of the problems put forth. These examples will set up a thesis for aspects of deafblind communication, a thesis with impact on cognitive semiotics in general.

The analyses in this thesis are conducted on three video taped conversations between cdb children and their adult partners. Two of the sequences are published by DbIWGC (1999 and NUD 2000), and one sequence I have borrowed from the corpus of Nafstad's research⁵. For this I am deep in her debt, as well as for her many enlightening questions and comments on my work while in progress. Likewise, I could not have performed my analyses without her and the working group's information on the

⁵ This video sequence is still protected by Norwegian ethical laws, and it may not be distributed or shown. I had a special permission to use it in the thesis provided that it was not used in other contexts.

biographical origins of the signs and gestures used by the cdb children⁶ and their grown-up partners.

To get it started, I will make one prerequisite assumption. I will assume that what cdb children are doing, when using gestures, is *producing meaningful utterances*. I will import general tools and terminology, developed for cognitive semiotics and cognitive linguistics, to the analysis of the gestures of these cdb children. In short, I treat cdb tactile gesticulation AS IF it is signifying meaning - AS IF it is language. Language is here to be understood in a generic sense defined as: *a string of semantic entities (something like words) that are tied together in structural patterns (something like syntax)*⁷. This implies keeping a lookout for elements that take on the role as markers of linguistic categories such as ‘word class’, ‘morphology’, ‘syntax’, ‘closed class’, etc. The aim is not to lay out a full inventory, or even a superficial account of the grammar of any such proclaimed ‘tactile sign language’, but only to treat the interactions AS IF they were conversations, and to use all linguistic tools at hand in order to try to understand what it is all about. The main concern will be to examine the tactile communication for entities that might be singled out as “something like words” and structural patterns that might be described as “something like syntax”. This might lead to some exaggerated conclusions about the language capabilities of these cdb children, but my hope is that this approach will also lead to some useful setoffs for future research by pointing to some structural constants in their sign production.

One of these constants is that *shared memory* is the basis for the semantic potential of a sign. This is not restricted to cdb children. We are all inherently communicative beings, with brains that are hardwired for interacting with other human beings in emotional and pragmatic communication. This communication is rooted in our evolutionally acquired capability to conceptualise and attune to other human beings’

⁶ Congenital deafblindness is often a matter of degree. Footnotes at the beginnings of each analysis will indicate exactly how deaf and blind the three children are estimated to be according to the professionals.

⁷ Hjelmslev’s definition of language “paradigmatic whose paradigms are manifested by all purports” (1993:137) and the elaboration “... til ethvert forløb svarer et system, gennem hvilket forløbet lader sig analysere og beskrive ved hjælp af et begrænset antal forudsætninger...”(p. 10) are too concerned with the distinction of different languages. When Merleau-Ponty states that “Language takes on a meaning for the child when it *establishes a situation* for him” (1962:401) he does not consider what language “looks like”, but only what it “does”. Tomasello (2000:61) defines “linguistic skills” as “a “structured inventory of symbolic units”” making an unclear reference to either Langacker, Bybee or W. Croft. This is fairly close to my understanding of what language is, but is a bit too focused on the term “symbolic”. Even

states of mind (c.f. Trevarthen 1990, 1998 and 1999), and thus expecting the movements and sounds of other humans to be potentially meaningful and relevant to us. Figuring out just how these movements and sounds transfer meaning is a part of the cultural exchange – the cultural negotiation of meaning. *Negotiation of meaning* may preliminarily be defined as the *inter-subjective exchange of signs seeking to establish an agreement of the contents of a supposedly shared mental space*. How this negotiation of meaning is configured in different levels of the communication is what this thesis is all about.

The dynamics of the singular events of negotiating meaning is restricted by the culturally shared outcome of the history of this negotiation of semantic potential. In a “language” as private as the very limited tactile sign language of deafblind children, where signs are usually only shared by the closest related family and professional partners, the history of negotiation is not imbedded in a nurturing culture. It is far from having reached the stability of a “natural” language system. In fact, it is in the midst of its creation. While natural languages are imbedded in large cultural networks providing a large vocabulary and a stable grammatical structure, the languages of cdb children are only imbedded in very small cultures. They are fragile and dependent on intimate knowledge of each member’s experiences and on great creativity in the use of the signs. In such micro-cultures, the history of negotiated meaning is not confined to what Tomasello (2000) calls a “structured inventory of symbolic units”, but includes the whole set of remembered shared experiences of interactions with the world. This trust of episodic memory is of prominent importance for the development of signs in the minds of cdb children.

The importance of episodic memory is obvious when dealing with *these signs in the making*, but what is the relation of this to “normal” multi-modal language acquisition? What if fundamental findings about the nature of the process of negotiating semantics from episodic experiences could provide important knowledge about “normal” language acquisition? What if cdb children develop language (in a generic sense) in slow motion, but otherwise according to some of the same parameters as hearing and seeing children? An affirmative answer to these questions will be the

though all language by its nature must be symbolic, the reference modalities of the signs are not necessarily so.

working thesis of this paper. My hope is, that dealing with the problem of negotiating meaning as based on such a memory-trust of semantic potential will shed light on the dynamics of the process of semiosis as such.

1.3. The structure of this thesis

The dynamics of the process of semiosis, understood as one of negotiation, will be the basis of the analyses presented in this thesis, and the semiotic tools used will be modified accordingly. The tools for understanding cognitive processes in terms of mental space networks are thus modified by the focus of the analysis. The negotiation of the sign is explicitly integrated into the model by providing a schematism for the trust of memory - of semantic potential.

In the chapter **2. Something like language** this modification of the *mental space* and *blending* models will be explained and discussed, as I introduce the semiotic tools I will use in this thesis. These are based on two traditions. The one being the theories of mental spaces and blending, and the other being ethnographic methodological conversation analysis (hereafter CA). The 5-space model of Per Aage Brandt (e.g. Brandt & Brandt 2002) will be modified, as explained in the first part of the chapter, into a 6-spacer by adding a *memory space* in order to accommodate the needs for analysing the semantics of cdb communication as part of episodic memory. CA will be introduced in the second part of the chapter as a tool for describing the negotiation of meaning going on in the conversations with cdb children. The findings in CA about marked and unmarked turn-taking and adjacency pairs with preferred and dispreferred seconds will be introduced briefly.

In the following chapter, **3. On transcription**, I will propose a preliminary systematic for transcribing an ongoing conversation consisting of not yet conventionalised tactile signs. To present the system for transcribing before the analysis is actually an inversion of the work process behind this thesis. The development of the system was in the work process deeply interconnected with the unfolding of the analyses, and the choice of conventions is actually a result of this analytic process. Nevertheless, for the reader of this thesis, knowledge of the transcription system is a prerequisite for understanding the transcriptions, which are used for the analysis; hence the prolepsis.

In the subsequent chapters I will let the presented tools and the suggested system for transcription work together in making the tactile sign language of cdb children “look like language”, for the sake of understanding what is being “said” and how. I have chosen to present and analyse three sequences of interaction between cdb children and their grownup partners. They are selected in order to give three different accounts for central aspects of cdb conversation.

In the chapter, **4. How to create a sign**, I analyse the first sequence where a very young cdb child is engaged in a negotiation about a nursery rhyme performed by his mother. This intersubjective interaction leads to the development of referential signs from spontaneous gestures. The analysis set up some fundamentals about this *transformation of the referential mode*. As a short intermezzo I compare my findings with those of Roland Posner (2002) about everyday gestures as a result of ritualisation.

The creation of semantics and the negotiation strategies pointed out in this analysis will be the basis of the chapter **5. The proto-sign**, in which some phenomenological constants of the gestural signs used for negotiating meaning tactilely are proposed. I will use the term *proto-sign* to refer to these *signs in the making*. Based on this phenomenology I will propose a *typology* of these gestural signs used for negotiating meaning tactilely.

These fundamentals of cdb language are further investigated in the following chapter, **6. Th and the dolphin**, where the cdb child Th is encouraged to “tell” about an experience with a dolphin. In the first part of this chapter I will suggest a way to describe the meaning of negotiated tactile signs as “something like words”. I will show how the understanding of the semantics of a sign is highly dependant on knowledge of the episodes in which the sign was negotiated originally. Relying on this trust of semantic potential I will suggest a way to transcribe and translate the signs used in the conversation analysed. In the second part I will show, by means of CA methods, how these signs are structurally tied together in the course of a sequence. We will see how conversational negotiation may support a sequential step-by-step negotiation of the structured building of a shared mental space. This chapter suggests a way to understand this combination of the signs as ‘something like syntax’.

In the following chapter, **7. The lower-lip-delicious grabbing-size-snack**, the cdb girl Robin (Ro) demonstrates her capacity to shift between *different negotiation*

strategies in order to do the exact same thing as Th tried, namely to make the grown-up understand what she means. She does this – as I will show – by shifting between different levels of linguistic complexity, according to the level of understanding that the grown-up displays in her responses. I will show how Ro tries to make up “something like grammar” by using a familiar sign, DONE, in order to make her grownup partner, Ca, perform a shift in semantic domain from the here-and-now to the mental domain of *past tense*.

In **8. Summarising deeds and thoughts** I will summarise the findings of the thesis, and the choice of analytic tools will be evaluated. The main suggestions as to how we might understand cdb communication as “something like language” will be pointed out, and the questions for further cdb research that this work has revealed will be summarised. At the end, an essayistic discussion of the problem of the generic sign THIS-KIND will touch upon some implications that the present thesis on cdb communication has for linguistic and cognitive semiotic research.

The **Appendix** contains the data (and my organisation of it) that this thesis is based upon. This includes: **I**, a videocassette displaying the analysed sequences⁸; **II-IV**, my suggestions for transcribing the sequences; and **V**, background knowledge on the signs used by Th in chapter 6.

I suggest that the reader views the video (appendix I) and compare the sequences to the transcriptions (appendix II) before reading chapter 4-8.

⁸ This appendix is not included in this publication.

2. SOMETHING LIKE LANGUAGE

In this chapter I will introduce the semiotic tools I will use in this thesis. These are based on the theories of mental spaces, blending, and on ethnographic methodological conversation analysis (hereafter CA). The 5-space model of Per Aage Brandt⁹ is modified, into a 6-spacer in order to accommodate the needs for analysing the semantics of cdb communication. CA is introduced as a tool for describing the ongoing negotiation of meaning in the conversations with cdb children. The findings in CA about marked and unmarked turn-taking and adjacency pairs with preferred and dispreferred seconds will be introduced briefly.

2.1. *Mental spaces and semantic potential*

The sign model used in this thesis is based on the theories of mental spaces and blending, as they are conceptualised by Turner and Fauconnier (1998), and further developed by Per Aage Brandt into a functional tool for describing the dynamics of meaning production. I operate with conceptual integration on all levels, and in this sense I am in line with the Aarhusian understanding of conceptual integration networks, rather than the American mental space and blending theory. When operating with lower levels of conceptual integration, the concept of a mental space modelling must be widened to include these unconscious processes in the mind.

2.1.1. Environmental and mental contexts

The 5-space model developed by Brandt has explicated the pierceian *interpretant* as a need of a relevance (in the 5-spacer represented by the relevance space) in the coding/decoding process, and thereby further stressed the processual character of handling signs.

To examine the semiosis in its cognitive context, it is not satisfactory to state its dynamicity by adding an ‘interpretant-blackbox’ to the binary sign, one have to address the process of interpretation *before* it is fixed in an interpretant.

A generating factor in the semiosis is the emotionally anchored will to communication. We want to understand and to be understood. And we seek relevance in

⁹ For a full account of the 5-space model see Brandt and Brandt (2002).

the environment, relevant to ourselves and relevant to others. The interpretant is what fixes a *reference* to a *presentation* in the process of coding and decoding, and thus creating stable meaningful signs in a given context. *Intention* and *relevance* is what initiates and generates the dynamics of coding and decoding.

Till this day, semioticians have been concentrating on the already fixed sign, and the quest for the relevant interpretant. This kind of analysis often consist in stating the obvious (in simple signs) or deciphering the complexity of internal structure in the relevance space (of more complex signs), which is the same as stating the not so obvious. Thus semiotic analysis is equivalent to spelling out the relevant interpretant. Still nothing is said about ‘how’ this interpretant emerges, or ‘how’ the relevant becomes relevant. What is spelled out is ‘what’ meaning is fixed by ‘what’ interpretant in the sign, and not ‘how’ it is fixed.

But how does a subject select the right interpretant – the right schemata, needed for fixing the sign in an understandable meaning? From where does he fetch the schemata that the semiologist later will state as the relevant interpretant? Structures within the ‘meaning’ as well as in the ‘sign’ must ‘tell’ the subject how to connect and fixate reference to a presentation in a stable sign. It has to be part of the material of signification in some sense. This material is not just the presented physicality of the sign, but also the material basis of the mind: the brain.

Furthermore, the meaning is highly dependant on the *context*. Context is here to be understood in two domains: One is the external context of the ongoing exchange with signs in the environmental here-and-now situation, the other is the context of the mental trust of reference potential in the memory. This meaning potential is here to be understood as *the subject’s bodily experiences with the world structurally integrated in the mind/brain as memory*.

This mental context is not represented in the 5-spacer. In this thesis I have chosen to include this memory as a separate *memory space* in order to show the exact mappings that are active when creating signs. The 5-space model of Brandt is thus modified in this thesis into a *6-space model* to adapt to the field of research at hand.

2.1.2. The 6-spacer

When a sign is *presented* in a semiotic situation, *base space*, it will feed into the *memory* of the receiver in order to connect with a coherent *reference*. In the case of cdb

children trying to create references from a very limited storage (if any) of conventional signs, the episodic and semantic memories, and the way they are interrelated with sign-making are of great importance. In order to realise what exact reference is intended by a gesture, the trust of episodic memories with semantic potential is what the adult partner needs to consult in order to find the “right” reference¹⁰.

This process of finding the “right” reference is guided by two factors in order to narrow down the possible matches from the vast amount of associations and connotations the sign is capable of connecting to.

One factor is the structural integration in the brain of the episodic and semantic memories that the specific sign is able to re-evolve¹¹. The memories of episodes or semantic meaning that the sign connects to are selected due to mappings between *the perception trajectories* of the sign and the *memory trajectories* of analogue signs. Memory is a question of degree of integration in the mind/brain. How well something is learned or ‘stored’, and likewise how well it is retrieved, is (roughly speaking) a function variable to degree of familiarity and relevance. What becomes significant in this process of finding the right interpretant is the degree of relevance and familiarity attached to *coinciding semantic potential*. This degree can be understood in mental space terms as the number of mappings between the environmental and the mental contexts on the one hand and the presentation (in the case of coding) or the reference (in the case of de-coding) on the other. Re-evoking of a memory requires some sort of prompting from the senses (environmental context) or from the cognitive processing of these inputs (mental context). These prompts are the *content mappings* in the model.

But still, every sign has a great many possible meanings according to the situation and mode of interaction in the base space. The *second factor* that guides the selection of the “right” meaning is based on the structure of the situation and the interaction. From these structural restraints of coherence and relevance a set of cognitive schematics are derived and ascribed to the interpretation of the sign. These schematics are represented in the model by the *relevance space*. The relevance space is what guides the semantics into a relevant stabilisation of the meaning output from the

¹⁰ In the chapter **6. Th and the dolphin** I will explain how to know when a reference is “right”.

¹¹ See Glenberg (1997) and Ask Larsen (2002).

sign in the given situation. The *schematic mappings* between sign, situation and memory generate this second factor of structural restraints on meaning production.

The sign itself is experienced as a *blend* between the presentation and the reference, and the *meaning* is what feeds back from the understanding of this blend into base space.

In figure 2.1 and 2.2 this 6-spaced model is presented. For pedagogical reasons it is split up in two figures representing two aspects of the mental network. Figure 2.1 shows the flow of space delegation in the case of a post hoc interpretation of a given sign in a given situation. In the case of creating a sign, the direction of the flow will be slightly different, but the interconnections are the same. When interpreting a sign, you are actually trying to backtrack the flow of the person who created the sign. As this is the analyst's approach, this flow of tracking down the intended space delegation is what is presented here. Figure 2.2 shows the possible mappings between spaces, required for the network to be operable.

Base space is the semiotic situation, as it is configured in the mind of a single person. The elements of base space are principally shared by all participants, and should be available to the analyst. "Base space [...] is a record of the relevant interactional history (the previous interactional trajectory)" (Hougaard & Rasmussen 2002a).

From this basic semiotic space a *presentation space* is delegated. Here the presented sign is perceived.

This presentation feeds into the shared storage of semantic potential, which the sign carries on from its history of negotiation. This mental space is not to be confused with the generic space of Fauconnier and Turner. In the present model a special space is set up to represent these *memories with potential meaning*.

The selected reference of the sign is represented in the model by *the reference space*.

The presentation and the reference are bound together by the relevance in the given situation, here to be understood as the cognitive schematic according to which the reference is to be decoded. This is set up in a separate space, *the relevance space*.

The meaning of the sign is the successful integration of all these elements. This meaning is fed back to base space and is integrated in the context of the ongoing

conversation as well as in the history of negotiation, as a further definition of or elaboration of the semantic potential of the sign.

Fig. 2.1. The 6-space model: *space delegation and flow of meaning*.

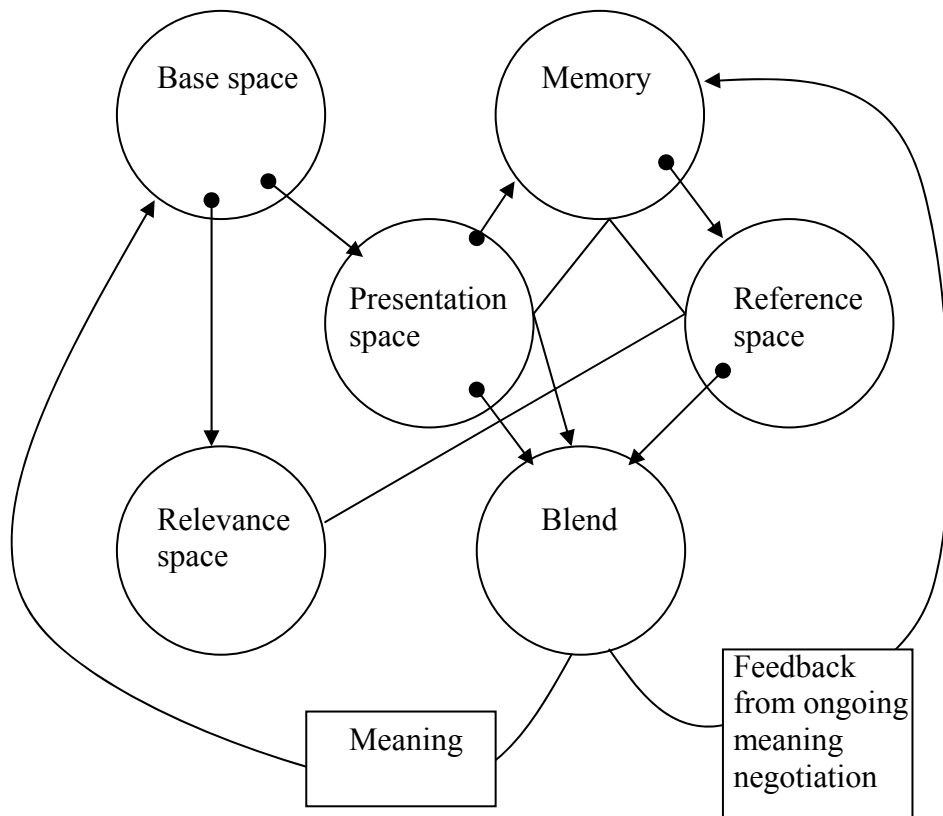
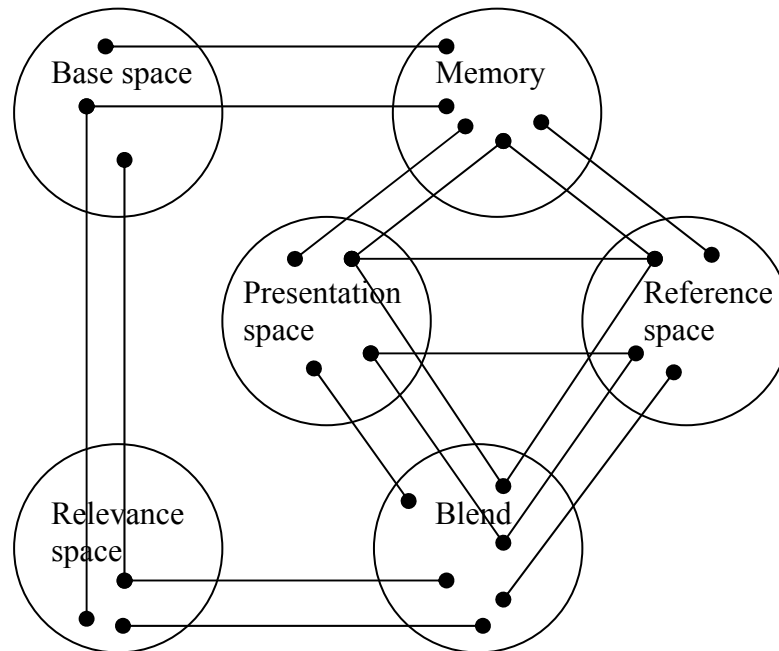


Fig. 2.2. The 6-space model: *mappings*.

Some of the mappings are connected inside the spaces to indicate that some mappings are shared among spaces, others are not. Where and how this occurs is part of the specificities of the actual analysis.



2.2. Conversation analysis

This will not be an introduction to CA as such, but only to some basic findings of CA that I find use for in the analyses of this thesis. It will be a very brief and selective introduction that is primarily based on the introductions made by Stephen C. Levinson (1983), Charles Antaki (2002), and the original article by Harvey Sacks et. al. (1974). Thus I make no claims that the introduction presented here is up to date or representative for the research done by those practising CA.

A source of inspiration for combining the mental space theory and CA has been the work by the EMCA (ethnographical methodological conversation analysis) group at University of Southern Denmark on *blending in interaction* and *conceptual disintegration*. (e.g. Hougaard 2002a, 2002b and Hougaard & Rasmussen 2002a, 2002b). That “people who are engaged in conversation actually make sense of what some other part is saying by constructing meaning as utterances are being made, step by step in some chronological accordance with the gradual emergence of the utterance”

(Hougaard 2002a p.4) is especially true when considering the difficult task of “constructing meaning” in conversations with cdb children. CA capture the “step by step” aspect of attuning to each others mental spaces, e.g. agreeing on a shared reference. As we shall see in chapter 6.2., a step by step negotiation might in cdb conversations result in “something like sentences”. The co-structured building of a shared mental space resulting from such sequential negotiations can best be understood in terms of “something like syntax”.

The main findings of CA that I will refer to are the notion of *sequential organisation of turn-taking* and the related notion of *adjacency pairs* with *preferred* and *dispreferred* second parts.

2.2.1. Turn-taking

“The mechanisms that govern turn-taking [...] is a set of rules with ordered options which operates on a turn-by-turn basis” (Levinson p.297). It is these mechanisms and their implications on the co-creation of meaning in conversations that CA is primarily concerned with. In cdb conversations these mechanisms are indications of the intersubjective negotiation of meaning. In fact it is the only indication of the successfulness of a given communicative act. We cannot ask the cdb child whether or not our interpretation of his or her utterance is correct, or whether or not ours has been understood. All we have to judge by is the flow of the interaction, the emotional expressions, and other markers of co-reference¹². Pointing out the visible (or, more precisely, tactile) markers of the mechanisms of turn-taking in tactile signing is a first prerequisite for understanding the mechanisms of tactile co-construction of meaning – of mental space.

The single turn is from the point of CA seen as a joint construction. “Over the course of a single turn’s construction, interactional feedback is being systematically taken into consideration” (op.cit. p.337). In the multi-modal conversation of seeing and hearing people “interactional feedback” is often given non-verbally such as by nods, facial expressions, or interjectional sounds (eh, hum, etc.). This feedback informs speaker (among other things) about the listener’s level of attention and understanding.

¹² On co-reference see chapter 4 (e.g. fig. 4.4.).

Understanding how such interactional feedback is configured in the uni-modal tactile signing is basic for understanding how meaning is negotiated.

One of the findings of CA is that the transitions of turns are structured in standardised sequences that restraints the turn-taking. For example will the beginning of a telephone call be expected to start with a standard opening sequence consisting of

T1 (C:) the phone ringing ((summons))
T2 R: ((answer + station identification/display for identification))
T3 C: ((greetings 1st part + claim that C has recognised R))
T4 R: ((greetings 2nd part + claim that R has recognised C))
T5 C: ((first topic slot))
etc.

ex:¹³

T1 C: ((rings))
T2 R: Hello.
T3 C: Hello Rob. This is Laurie. How's everything.
T4 R: ((sniff)) Pretty good. How 'bout you.
T5 C: Jus' fine. The reason I called was ta ask ...
etc.

2.2.2. Adjacency pairs

Sequences as the above are further dividable into *adjacency pairs* such as the summon-answer pair in turn 1 and 2. Based on the introduction by Levinson I suggest the following definition:

Adjacency pairs are sequences of two utterances that are:

- (i) produced by different speakers;
- (ii) ordered as a *first part* and a *second part*;
- (iii) biased, so that a particular first part create expectation of a particular second (or range of seconds). The bias determines which second parts are *preferred* (structurally unmarked) and which are *dispreferred* (structurally marked) – e.g. offers prompt for acceptances or rejections, and so on.

¹³ Levinson (p.312). I have added the turn numbers and T1 for illustrative purposes even though I am aware that this kind of modification of data is contrary to CA practice.

That they are *biased* is my interpretation of Levinson's explication that

“preference here introduced is not a psychological one, in the sense that it does not refer to speakers' or hearers' individual preferences. Rather it is a structural notion that corresponds closely to the linguistic concept of markedness. In essence preferred seconds are unmarked – they occur as structurally simpler turns; in contrast dispreferred seconds are marked by various kinds of structural complexity”. (p.307)

It is liable to expect that cdb conversations would provide something that is equivalent to such adjacency pairs. How they are distributed in a given conversation will be determining for our understanding of the ongoing discourse.

In cdb communication whether a turn-taking is marked or unmarked is directly visible in the physical shift between hand-positions¹⁴ and hand-locations¹⁵. Any kind of application of force or hesitation to such *turn-transitions* (hereafter TTr) will indicate a marked TTr in contrast to an unmarked TTr that will seem as one corporate flow of movement. These marked turn-transitions will always be of great importance when analysing the negotiation of meaning going on in the conversation. Hesitation, forced turn taking, forced turn refusals, or forced turn giving will often indicate some degree of misunderstanding or uncertainty in the negotiation. Microanalyses of these TTrs based on the study of hand-positions, attention toward relocation of sign-locus, pauses, and co-reference markers (interactional feedback) would in my opinion reveal a great many secrets of how to improve the communicative skills of both cdb children and their partners¹⁶. No systematic treatment of such marked TTrs have been possible within the limits of this thesis, though a few examples are attended to when they occur in the analysed sequences.

¹⁴ Hand-positions (and their importance for attention and turn-taking has long been subject to research within the field of tactile sign language of people with *acquired* deafblindness (c.f. Mesch 2002, 1998 and Dalum et. al. 1997).

¹⁵ By hand-location I mean the positioning of the hands according to shifting sign-loci.

¹⁶ This study is now facilitated by the *graphic notation system* that Nafstad and I sketched out during a stay at Skådalen in June 2003 (c.f. appendix III). The co-development of this notation system and the analysis of turn-transitions are left for now as future research.

2.3. Outro¹⁷: In this chapter I have

suggested some analytic tools for treating cdb communication AS-IF it is language. The 6-spacer will be used for describing the semiotic contents of the utterances, and the CA will be used for describing the negotiation of these contents in the conversations going on in the videos. The combination of these two analytic paradigms will thus provide us with the necessary tools for analysing *meaning negotiation*. The use of CA makes it evident that a system for detailed transcription of these conversations is necessary for sufficient precision in the analyses. Such a system is suggested in the following chapter.

¹⁷ My use of the term ‘outro’ has been subject to some critique, and I therefore take this opportunity to respond to that. The term is obviously a blend between the English ‘out’ and the short informal form ‘intro’ for ‘introduction’. This blend provides an informal leading (ducere) the reader out of the chapter instead of the more formal ‘conclusion’ or ‘summary’. I apply this *creative use of conventionalised signs* as homage to the spirit of cdb communication.

3. ON TRANSCRIPTION: HOW TO MAKE IT LOOK LIKE LANGUAGE

In this chapter I will introduce a system for *transcribing cdb conversations* in such a way that the transcript can be used for analysing these cdb conversations AS-IF they are performed in something like language.

3.1. *Transcription as translation*

In order to pinpoint the meaningful signs of the examples of deafblind conversation used in this thesis, I have tried (supported by enlightening questions and comments from Anne Nafstad) to develop a systematics for transcribing the conversations between deafblind children and their grown-up caretakers. This is a very preliminary attempt. A fully operational system for transcribing tactile sign language of this kind is a field of research yet to be ventured upon. This first suggestion is based on the few examples analysed in this thesis, but my hope is that my onset will prove fertile if developed in the process of future transcription of this kind.

The choices for the notation system proposed here are based on the quest for understanding the cognitive semiotic mechanisms of the utterances when transcribed from the video recordings. I have tried to adapt conventions for transcribing from CA to the Nordic conventions for transcribing sign language. This means that some notation standards (as writing signs in capital letters) are taken from the Nordic tradition¹⁸, others from the Jeffersonian¹⁹ conversation analysis, and yet others are created for the special purpose of transcribing tactile signed conversation. The aim has been (and still is) to develop a standard of transcription that is both easy to read and precise regarding semiotic and cognitive content. Transcribing tactile signed conversation is in this sense a tool for understanding what is being said, and far from a mechanical “word-by-word” translation. This will be evident in the discussion of the transcription of ‘Lasse and his mother’ below. Asking how to transcribe tactile sign language is actually asking the question of how to understand it as being language. It is to investigate the cognitive

¹⁸ I have tried to stay close to the standards of Elisabeth Engberg-Pedersen, but using only one line as in CA where Eng.-Ped. has 8 lines accounting for different aspects in the visual field. Eng-Ped (1998 p.22ff). Many of these aspects are irrelevant when dealing with tactile signed language.

¹⁹ E.g. as in the “Jefferson system” described by Antaki (2002) and performed by Sacks (1992) and Sacks et al. (1974).

linguistic characteristics of the signed conversation. The analyses performed in this thesis are very much grounded in the attempt to make the seemingly opaque gestural movements performed by deafblind children look like language, when put down on paper.

The process of transcription is a way to overcome “the absurdity to attempt to describe these [bodily not formal-language] ways [of expression] and their practices by engaging in the acts of writing and production of words” (Goode 1994 p.121). Instead of “language-ification” which is the term used by Goode, I use the term transcription. This transcription faces the same obstacles as any other transcription of a lived natural language into its written form. One major difference is, however, that no equivalent to the phonologic alphabet is available for transcribing gestural signs. The transcription is thus a *translation* from a language in one sense-modality (tactile sign language) to another language in another sense-modality (literal English in this case) – a translation before the transcription.

This has several implications on transcription. Negotiated and conventionalised signs give the least problems. They are clearly conventional gestural signs used in interchanging information among people. But how can I claim that they form a language? The signs that these children master are very few in number, usually only spread among a very small group of people, consisting usually only of the nearest family and some professional staff. Still, most of the times these signs occur, they behave as conventional linguistic signs “should”. They act linguistically in the same ways as words with conventional meaning in larger, more widely shared languages like Danish, English, Arabic or Chinese, hence engaging in syntactic structures, determining their grammatical function and semantic meaning.

I have chosen to transcribe the referential gestures as *signs* (in capital letters) according to their mode of reference (what they refer to, and how), and not merely as *gestures* according to their gestural iconicity (how they are performed). The choice of transcribing the sign by its *core meaning*²⁰ has been made in order to leave out the speculations on the grammatical and syntactic structures of the utterances. These

²⁰ The question of how this core meaning is derived from the history of negotiation of the sign is addressed in the chapter **6. Th and the dolphin**.

speculations are part of the following analysis, not the transcription itself. But still these questions will have to be addressed, and they will be so in the following chapters, when we have some clues of how these signs came into being in the first place. In the course of transcribing the video sequences, we have been facing the problem of transcribing signs while these signs are still in the process of negotiation, that is, *before* they are conventionalised and lexicalised in a stable semantics.

So what about the gestures that are not yet negotiated into having a conventional meaning? And what does it mean to be negotiated into a conventional sign? These questions are the main concerns of the analyses in this thesis.

The analysis in this thesis will be performed with the clear purpose to clarify the structural cognitive patterns behind these modes of reference. In this sense, the transcription is a tool for understanding the mechanisms behind cdb children's capability of making significant references at all.

3.2. Notes on the notation

The following is a list of the suggested signs for notation of cdb conversation. Each sign is ascribed a brief explanation, and wherever a sign rises further questions a footnote will sketch out the implications.

(SL)²¹ means that the notation is borrowed from traditional transcription of Sign Language. (CA) means that the use of a sign is equivalent to its use in conversational analysis. (FAL) simply means that I have made up the notation for the purpose, or use it in a way different from conventional writing.

3.2.1. Signs: something like words

(1) SIGN

Negotiated signs or proto-signs²² are written in capital letters. If more words are necessary they are connected by dashes: POINTING-TO-RADIATOR. (SL)

(2) 'SIGN'

Not completed sign. (SL)

²¹ I will only use the abbreviation SL in this manner in this chapter. When transcribing SL will mean Sign-Locus as described below. As these two uses are on two different levels (here a reference to the origin of a notation and later on as part of the notation) they should not get confused.

²² The term proto-sign is dealt with in depth in a separate chapter. This paper is suggesting a preliminary set of such proto-signs as the basis for the deafblind negotiation and acquisition of signs.

(3) ^

Concatenation signs connect two or more signs performed as one (ex: POINTING-to-SAME-PLACE^GRABBING-SAME-SIZE). (SL)

(4) +

Adds additional information about modifications of the sign. Ex.: BATHE+coactive, DOG+repeatingly, EAT+transactive. (SL). These modifications differ from those of visual sign language in many regards. The exact inventory of possible modifications is a very important field of research yet to be taken up. The meaning of the different modifications is likewise important. For example: SIGN+coactive might sometimes mean 'I am listening and understanding' (active/affirmative listening), but as the example with Robin and the petit gervais shows, it can also mean 'yes, that is what I mean!' (confirming statement). In this thesis I have not found place for a systematic treatment of these modifications. Eng.-Ped. (1998) has a very thorough treatment of different kinds of modifications with great grammatical importance for Danish sign language. A similar systematic treatment regarding tactile sign language is likely to prove of great importance.

(5) *R / *L

Performed by right / left hand (only when significant) (FAL)

(6) > <

Said or done >quickly< (CA)

(7) < >

Said or done <slowly> (CA)

(8) wo:rd

The preceding syllable is prolonged (in speech) (CA)

3.2.2. Turn-taking markers

(9) (→*) or FTT

Forced Turn-Taking. * takes position as speaker (FAL)

(10) (*→) or FTG

Forced Turn-Giving. The subject (*) changes position to listener (FAL)

(11) (←*) or FTR

Forced Turn-Refusal. * refuses to take position as speaker. (FAL)

These three signs are only used when a visibly *forced* turn taking is taking place (e.g. marked repositioning of hands, pulling or pushing hands of the other). No sign indicates that the turn is passed without such visible signs. Whether this lack of a visible marker indicates a mutually agreed and “natural” turn taking is questionable. Marked turn-taking may be indicated by other means (hesitations, interruptions, etc.), just as in vocal conversation. Cf. Jefferson (1974): “[...] the existence of organized turn-taking is something that the data of conversation have made increasingly plain” (p.699); and further: “transitions are finely coordinated” (ibid.); and likewise: “Turns are valued, sought, or avoided” (p. 701). In the few preliminary analyses of this thesis, it is already made clear that this turn-taking is of equal importance when considering cdb communication, even though the “techniques for allocating turns” (cf. op. cit. p.699) differ from those of spoken languages. These techniques and the impact of turn-taking on the negotiation of meaning is yet another field of research only very sparsely treated in this thesis, but one of great potential for future research.

(12) (.)

Micro pause/hesitation (CA)

(13) (2.05)

Timed pause²³. Duration in seconds and frames (CA/FAL)

(14) , and .

Used as grammatical markers of sentence and phrase, as supposed by the transcriber

(15) [

Overlapped by interruption/simultaneous signing from other(-s). Or signer interrupts or overlaps previous signer. Two (or more) brackets placed one above the other in two succeeding lines indicates that these lines are performed simultaneously from the point of the brackets and onwards (CA)

(16)]

Optional. May be used to specify the endpoint of an overlap (CA)

(17) =

Placed at the end of an overlapped line and at the beginning of the line where it is taken up again (CA). If used inside parentheses it indicates identity.²⁴

²³ Better equipment for analysing the video sequences would improve the accuracy of these indications of pauses.

3.2.3. Oral and Visual parts of the conversation

(18) “speech”

Oral language

(19) “!” / “?”

Affirmative/interrogative intonation. (FAL)

(20) /

Simultaneous speech supporting the sign (ex.: BATHE/”bade!”) (FAL)

(21) (gesture)

Descriptions of movements, gestures, or acts are given in (single) parentheses (CA)

3.2.4. Comments and analytic remarks

(22) ((analyst’s comment))

Double parentheses indicate comments from the analyst. (CA)

(23) ◇

Connects signs which have meaning components in their semantic potential, used in combination to form *one* new suggested sign (ex: *EATING◇DRINKING* = EATING-PETIT-GERVAIS??). Also when ambiguous sign. (FAL)

(24) ??

Suggestion (ex.: meaning of not yet negotiated sign, or description of unclear act or speech – see above). (FAL)

Additional signs and terminology specific for the conversation analysis of cdb tactile conversations will be given in the chapter, **Th and the dolphin**, as they are presented in the analysis. Future research might find ways of integrating even more of the findings of CA analysis in the analysis of cdb signing. In this thesis I only include the notations that I use in my analyses

3.3. *Outro: In this chapter I have*

suggested a systematic for transcribing the video recorded conversations of cdb children and their adult partners. In the following chapters I will let the tools I have presented and the suggested system for transcription work together in making the tactile sign

²⁴ Just as in formal logic. See Lemmon (1965) p.159ff.

language of cdb children “look like language” for the sake of understanding what is “said” and how.

4. HOW TO CREATE A SIGN

In this chapter I will show how a spontaneous gesture from a cdb child is gradually transformed into a referential sign through negotiation with the adult partner. The analysis performed here will aim at distinguishing what stages the transformation of the spontaneous gesture undergo during the repetitive re-plays of a nursery rhyme and the in-between negotiations, and how it is negotiated into a referential sign. The analysis set up some fundamentals about this *transformation of the referential mode*. This will be the basis of a theory of these stages in terms of different proto-signs, describing their phenomenology and setting up a typology. An article by Roland Posner on ritualisation of gestures will be compared to the analysis. This will show how this kind of negotiation differs from that of ritualisation presented by Posner.

4.1. Lasse and his mother

In this sequence from the DbIWGC video “Udvikling af Kommunikation” (DbIWGC 1999), the cdb²⁵ boy Lasse (La) and his mother (Mo) are engaged in an English nursery rhyme performed tactilely and orally by Mo. The focus of my analysis will be Lasse’s developing understanding of what is going on, and how this understanding is reflected in his use of signs referring to the game and his experience of it. These references are made both during the rhyme and during the intersections where La and Mo negotiate whether or not to perform the rhyme again. Special attention will be given to the transformation of his emotional evaluation of the different parts of the rhyme. This will show how La’s attention moves according to his growing understanding of the rhyme. The use of signs and the emotional value of different moments in the composition of the rhyme will be used as an indication of the cognitive processes leading to his final level of understanding.

Before moving on to Lasse’s understanding of the rhyme, an analysis of the rhyme itself is undertaken, in order to clarify what the mother actually “says” to him by performing it.

²⁵ To be precise, Lasse is congenitally blind and severe hearing impaired. He is not able to distinguish words, but may understand sound as support to the tactile signs (source: Anne Nafstad dixit).

4.2. The nursery rhyme

The rhyme consists of four lines, each accompanied by a tactile illustration of the “story” told.

- (a) *Round and round the garden like a teddy bear*
 (The mother circles her index finger round and round in the palm of the child)
- (b) - *one step*
 (The mother squeezes gently his lower arm by the elbow)
- (c) - *two steps*
 (The mother squeezes gently his upper arm by the elbow)
- (d) *tickly under there*
 (The mother tickles the child under his arm)

For La the tactile inputs are not referential in the same sense as the words of the rhyme. They are merely a short musical pattern, building up expectation for the final tickle, which is the climax of the rhyme both in the tactile and the oral version. In line (a) the circular motion in the palm enhances the child’s attention by this uncommon behaviour of the mother. Lines (b-c) build up an expectation by the change in rhythm (the pauses are long in this passage). Then a sudden change of intensity in line (d) releases the tension built up in lines (b-c).

During the whole nursery rhyme Mo holds La’s left wrist, and in this manner keeps control of the conversation. She keeps the “turn”. This might generate a feeling of continuity, assuring that La experiences the nursery rhyme as one coherent whole. The rhyme is thus performed and perceived as a narrative whole with a build-up of expectation and a sudden climax. The function of this holding of the wrist has thus the function to keep La attending to the rhyme. The meaning of this tactile sign is something like “As long as I’m holding your wrist I perform a nursery rhyme”. The other tactile signs have a quite different function in the game. They are the figures of the narrative, as described above.

4.2.1. Reference mode

How can we describe, and transcribe, the tactile version of these narrative figures in terms of sign language? The first thing to consider is *the reference mode* of the rhyme.²⁶ By reference mode I mean the degree of integration or disintegration between *the presented* and *the referred*. The integration of these two components of the sign can vary on a scale from absolute singular numerical identity to the highest degree of arbitrary symbolic reference²⁷.

In the case of a nursery rhyme (considering that the child does not understand the words) the referred and the presented are indistinguishable. The only reference is to the singularity of the act itself. I term this reference mode *THIS-ness* or *singularity*²⁸.

4.2.2. Perceptive topology

As far as we can tell, what the rhyme provides for the child is a rhythmical pattern of sensations located at specific places on the body and with varying emotional salience. The rhyme is perceived as THIS-SENSATION at THIS-PLACE evoking different INNER-STATES of emotional arousal.

4.2.3. Interaction perspective

In short, the rhyme is an aesthetic singularity in the situation here-and-now. It is not meant to refer to anything outside this here-and-now – in fact the whole purpose of this kind of nursery rhyme might be to put emphasis on the interaction pattern itself, and the narratively structured emotional exchanges between mother and child. Playing these games could be a way of practising the child's notion of interacting with an intentional being in a meaningful (i.e. rhythmical and narrative) manner. The interaction is not a real conversation, but an “as-if” conversation, performed in a playing mode.

To transcribe the signs, used in the tactile version of the rhyme I have chosen the following format: THIS-SENSATION^PLACE+playing. ‘THIS’ refers to the mode of reference, ‘SENSATION^PLACE’ to the concatenation of the two perceptual topoi,

²⁶We must assume that for Lasse the tactile signing *is* the rhyme. The oral singing is only support for this tactile experience, due to his impaired hearing.

²⁷ C.f. the attempts to categorise this continuum into various typologies (e.g. Peirce, Eco, but also Donald, Sinha, and others).

²⁸ The terminologies of reference modes, perception topoi and interaction perspective are elaborated in full and discussed in the chapter **5. The Proto-sign**.

tactile exteroception and the combination of inputs, providing a notion of location²⁹, and ‘+playing’ refers to the mode of interaction³⁰. As a “pure” transcription of the game, I suggest the following³¹:

Transcription:

- (a) THIS-SENSATION^PLACE+playing
(circling index finger in palm in slow circular rhythm)
- (b) THIS-SENSATION^PLACE+playing+build-up
(light touch, then gentle squeeze of lower arm by elbow)
- (c) THIS-SENSATION^PLACE+playing+build-up
(light touch, then gentle squeeze of upper arm by elbow)
- (d) THIS-SENSATION^PLACE+playing+suddenly
(sudden tickle under arm)

By “pure” I mean the transcription without markers of deviations from the original nursery rhyme, and without the actual exchange and negotiation in this particular situation.

4.3. Negotiation of the reference mode

The next questions to address are how this particular instance of the rhyme is performed, and how Lasse understands the situation. The only access we have to the latter is by way of his emotional expressions, body posture and referential gestures concerning his experience of the rhyme. It is exactly the specifics of this interaction that are in focus here. Therefore the transcription of ‘Lasse and his mother’ in the appendix deviates from the “pure” rhyme by including the whole conversation. The line numbers in the following refer to the transcription of the whole sequence, available in the appendix.

The nursery rhyme is performed five times, each followed by a negotiation regarding whether or not to play the game again.

²⁹ See previous footnote.

³⁰ Future investigations into the differences between nursery rhymes and other kinds of games might suggest the transcription of this playing-mode to be divided into more fine grained category distinctions as +role-playing, +formal-playing, and +nursery-rhyme. For now I will stick to +playing.

Unfortunately no information is given in the video about Lasse's precedent knowledge of the rhyme. We are entering in the middle of the first line, and are given no indications whether this is the first time the rhyme is performed or not. Never the less, the ongoing changes in his attitude towards the rhyme show us how his understanding of the rhyme is gradually built up.

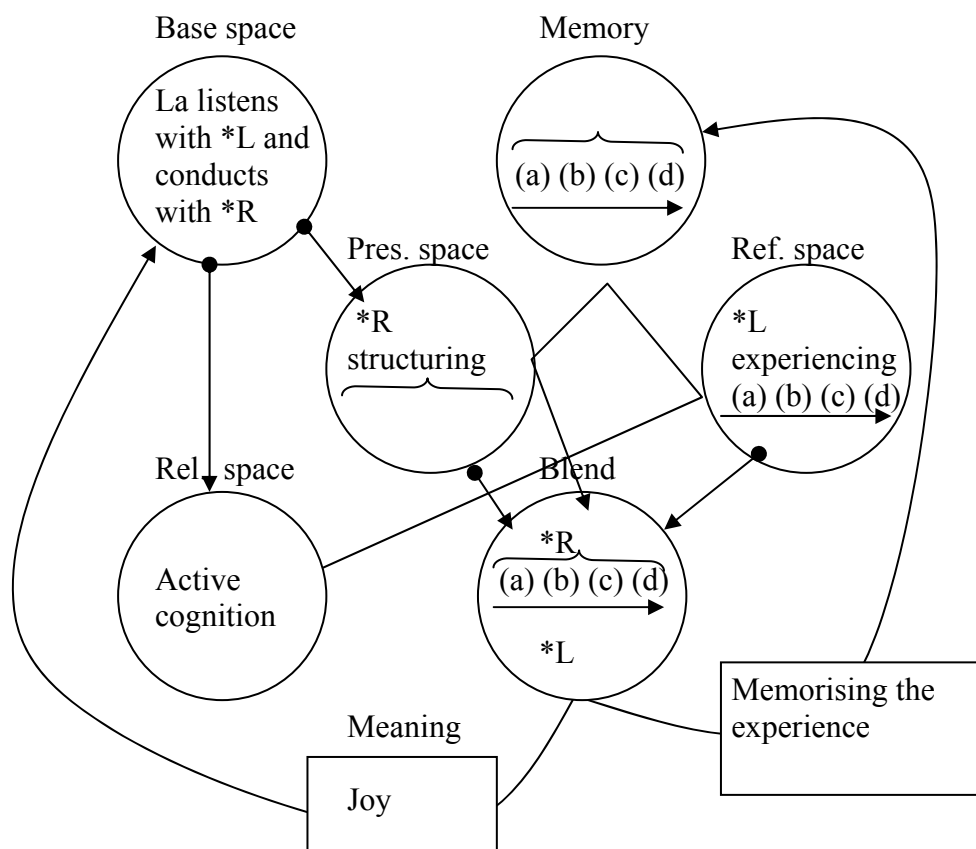
I believe it is important to distinguish between the performances of the rhyme (tacitly "singing" the four-line stanza) and the communicative interaction going on between the re-plays. If we differentiate between the *rhyme* and the *game* this interaction is part of this kind of *game* – the game being the whole interaction sequence with variations of the re-plays and in-between negotiations. But in the in-betweens there is a real communicative and referential negotiation about two different things: first, whether or not to play the rhyme again, and second, how to refer to the game in such a manner that it will be understood. The first is a matter of negotiating the actions to be taken, the second a matter of negotiating the application of a sign to signify the game. Most importantly, the second is a means for the first. You only need the sign if you want the rhyme. Nafstad argues that this kind of interaction (nursery rhymes) are "more of a meta-negotiation [...] about the co-construction of a declarative referential function as such [...] than it is about playing the specific game [now again] or not"³². And I agree that the game is about co-constructing declarative referential function. But it is not altogether a meta-negotiation. The reference that is constructed is an *actual* reference to the rhyme. And the declarative is a *pragmatic* declaration of the request for more of that rhyme (and thereby more of a conative than a declarative). The co-construction goes on three levels that feed into each other: (1) creating something to refer to (i.e. repeating the rhyme until recognition), (2) creating a presentation for this reference (i.e. agreeing on a sign for the rhyme), and (3) using the sign in a relevant manner (i.e. communicating about the rhyme with the sign). Level (2) might be said to be a meta-level compared to the ongoing pragmatic negotiation, but it is still an actual negotiation on that level. The following analysis will focus on *how* that second level of meaning negotiation is carried out in the tactile cdb communication.

³¹ For a full description of the notation see the chapter **3. On transcription**.

³² This is cited from Anne Nafstad in a comment on a draft for the present chapter in a private mail to the author. Similar notions can be found in Nafstad & Rødbrøe (1999), Hauge & Tønsberg (1998), and Trevarthen (1994 p.230ff and 1989 p.708f)

The first time the rhyme is performed (lines 1-13) we notice two important aspects of La's reactions: First, La accompanies actively the "listening" with rhythmic imitation of the tactile sign, imposed on his left hand by the mother. This results in a *conducting gesture* by his right hand (line 4)³³. This conducting gesture is understood here as an aid for cognition. The right hand indicates the structuring process of the active cognition, and the left hand is receiving the inputs to be cognised.

Fig. 4.1 The conducting gesture: Active cognition and memorising



Secondly, the main³⁴ emotional outburst (line 13) is at the very end of the rhyme, when the gentle squeezing of his arm (lines 6-8) suddenly changes to the much more intense tickling (line 11-12). We might say that La gets most pleasure from the suddenity or the

³³ cf. Trevarthen (1990, 1999 and 1999b).

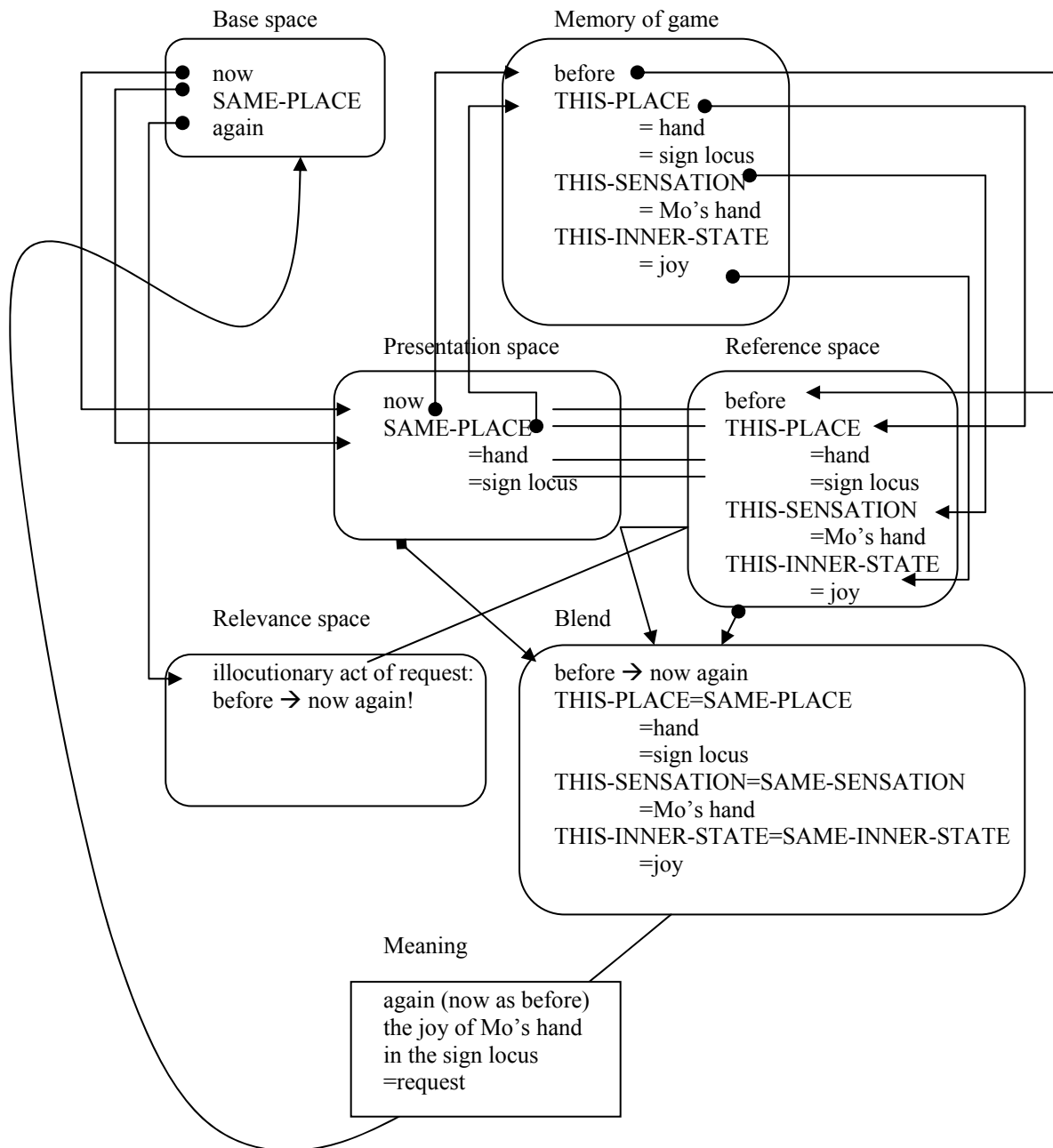
³⁴ The smile in line 9 might be an indication of Lasse being somewhat acquainted with the game beforehand, as this smile could be one of expectation, just as the ones in lines 29 and 46-47.

surprise of this contrast or peak shift³⁵. It is also worth noticing that La pulls away and tightens his fists while giggling, and then moves the right hand towards his left armpit.

After the game La stretches out his left arm in a speech act gesture, apparently meaning something like an imperative “more!” Let me try to explain (by means of the 6-space model in figure 4.2) this first sign that La uses in order to make Mo perform the nursery rhyme again. He presents a spontaneous gesture with speech act force “more of the SAME” is performed by a specific bodily locus (his hand) and in the communicative locus (sign locus) of the interaction with Mo. La places simply his hand in the sign locus again (c.f. the presentation space). He remembers that this sign locus is the same as where the hand of Mo brought joy before by signing the nursery rhyme (c.f. the memory space). The relevance of the sign of La is to bring back this memory, and a request of a repetition (c.f. the relevance space). The meaning of the sign is that La wants more of the same joy from this same sign locus. How these mental spaces interrelate is shown in figure 4.2.

³⁵ About the aesthetic value of such peak shifts, cf. Ramachandran (1999) p. 17 ff.

Fig. 4.2. Reintroducing “listening” hand in sign locus



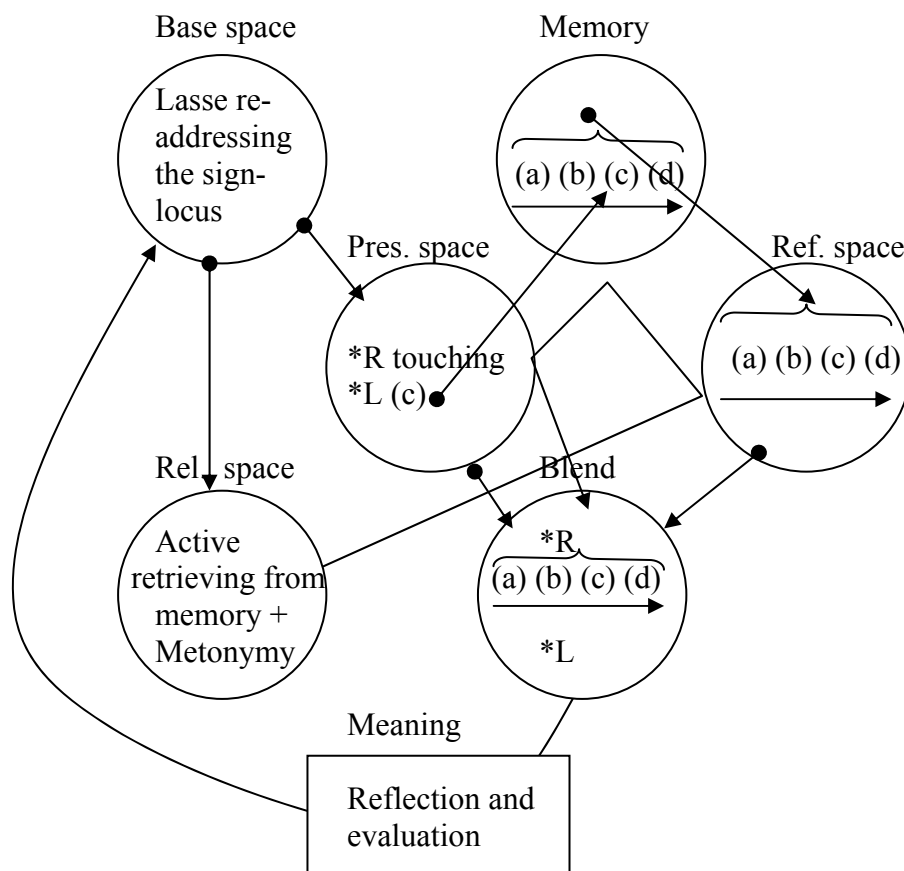
Mo does not respond to this. She waits (cf. the micro-pause in line 15³⁶) for La to elaborate on his request.

As this first sign doesn't in itself cause the mother to respond, he makes a spontaneous gesture touching his left elbow with his right hand. In other words, he

³⁶ In the transcript it is not mentioned that this pause is clearly a hesitation, as the mother has already raised her finger to respond but waits for his initiative. We might say that the mother here does intuitively what NN instructs her to do in line 82.

places the conducting hand at the place where he felt the gentle squeeze. It is as if he is placing the active “listening” (i.e. the cognition) on the place of the “sound” (i.e. the tactile singing of his mother). This reflective thinking-sign is not addressed to Mo, but is commented on by her as-if it was, and is reintroduced later as an addressed communicative sign by La.

Fig. 4.3 The thinking sign: Reflection and evaluation



From a behavioristic (stimulus-response) point of view, the part of the rhyme with the highest degree of stimulus “ought” to be the part of the rhyme where he was tickled. But if we look at this gesture from a semiotic understanding of cognition, line (c) is the most salient part, because it is where the *narrative* has its point of no return. This is the part of the game that gains his main reflective *attention*, because it is the *cognitively* most

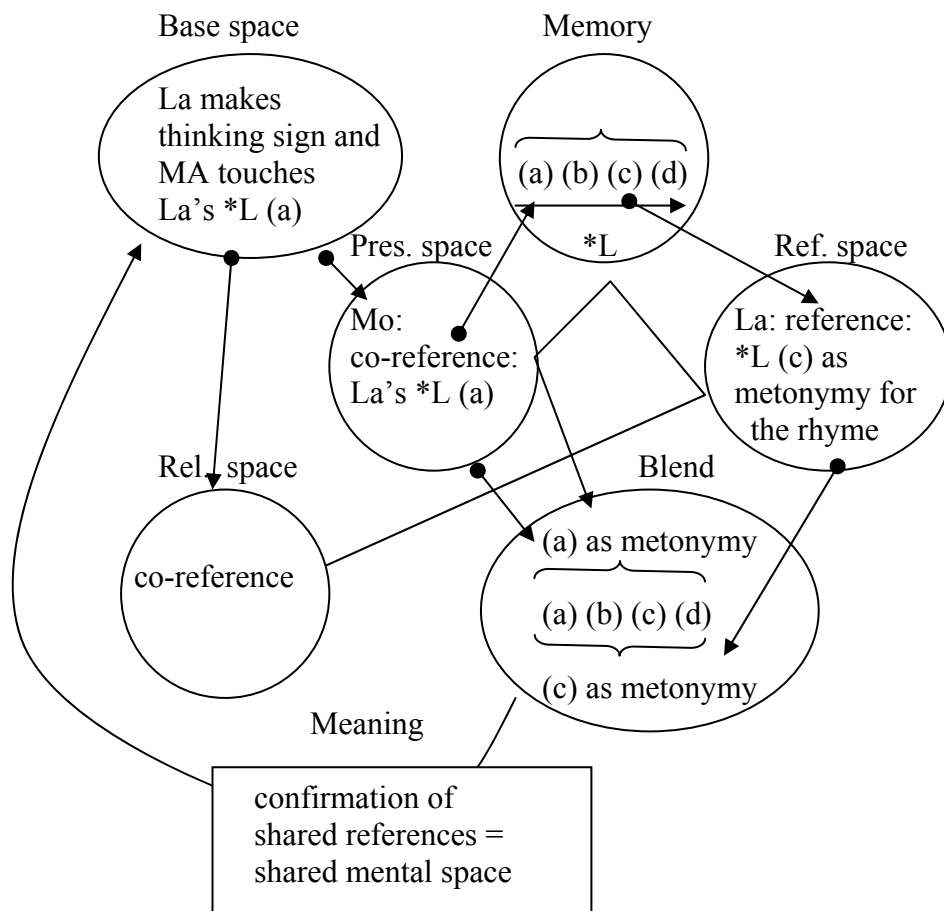
salient part³⁷. La refers in the case of the more elaborate but not yet addressed thinking-sign to the whole rhyme by using the part of the rhyme where the elbow was touched as a metonymic *window of attention*³⁸, even though his main emotional outburst was connected to the tickling under the arm. This part of the game is used as a *metonymic* sign for the whole experience. He refers by the narrative peak (in accordance with his own thinking-sign) to the mental space of the memory of the game: LIKE-THIS-SENSATION^PLACE+elbow. His mother confirms this thinking-sign and makes a co-reference (see fig. 4.4.) by touching his hand where the tactile signing starts (line 17) and by saying “is it this one?” She confirms in this manner her understanding of his sign as a reference to the SAME-PLACE and the SAME-SENSATION as cognised during the rhyme. La answers this by repeating the first speech act gesture. He re-introduces his left hand into the sign-locus, now in the sense of “Yes! More!”

Mo now responds by supporting the communicative aspect of La’s gesture. She confirms the communicatively more complex sign by touching his palm in the sign locus: LIKE-THIS-PLACE+palm “I understand this sign”.

³⁷ C.f. Hauge & Tønsberg (1998 p.57) as they refer to Stern: “[...] while there is progressively less physical stimulus density, there is progressively more cognitive stimulus density which operates during the silences.” (Stern 1982 p.102).

³⁸ I use the term ‘window of attention’ in line with Talmy (2000).

Fig. 4.4. Co-reference³⁹ to thinking sign: Confirmation of shared mental space.



The second time La and Mo play the game is slightly different from the first. Now La gets his arm in “conducting position” before Mo starts to perform the rhyme. The confirmation of his gesture by touching his palm (line 17) is enough for him to recognise that they are about to play again. In line 25 his conducting gesture is added a tight fist when line (c) of the rhyme (line 27-29) makes him smile as he anticipates the climax. It is likely to assume, that this indicates a rising intensity in his experience, in the same way, and related to, the tight fists when he giggled the first time. As they play, Mo makes a variation in the rhythmical pattern of the game, by adding a longer build-up before the climax (‘+build-up(!)’ line 30). La reacts to this with great pleasure. From

³⁹ Co-reference is here suggested as a cognitive capacity to understand schematically specific interaction behavior of others as signifying attunement in mental space. Whether or not this is inherent or learned is not the issue here. For now it is sufficient to assert that Lasse at this stage in his development has this capacity. See also Nafstad & Vonen (2000).

this it is clear that the expectation of the climax is a very salient part of the pleasure La gets from the game.

This time the giggle due to the climax is just as intense, but he keeps his attention on the giggle for about 3 sec. (line 33) before he reaches out for more. After a few seconds without his mother responding to his reaching out, he spreads his arms out and assumes the conducting position. He makes no further attempt at addressing his mother, until the sound of her voice (line 37) makes him turn his head and his hands in her direction. Then La introduces the new more specific sign. He touches his left elbow. He makes here an *iconic* representation of a part of the rhyme using it as a metonymic reference to the whole experience. MA confirms by touching his hand (in a co-reference), and they play again.

This third time he smiles from the very beginning of the game, and after the climax he introduces a new emotional expression. He grins with his face turned upward, waving his head from side to side, but is interrupted in this evaluation by the mother's voice. She takes the initiative this time, and refers to the game by touching his hand. This time La uses the sign of the mother (touches palm), and clearly gains great pleasure from this. He smiles as the meaning and use of this sign becomes clear to him (line 58).

While they engage in the game for the fourth time, La shows the same emotional expression as when he was evaluating the game just before, his face upward, waving from side to side with a big grin. As soon as line (b) begins, he stops conducting and turns his attention toward Mo with a concentrated look. When the build-up for the climax arrives, he clearly knows what to expect, as he starts to giggle even before he is tickled.

From these signs of his evaluation and enjoyment of the game, we must conclude that his main focus is now on his recognition of the game and his prediction and anticipation of the climax. Thus the sign of his mother is understood and used in their communication, and the elbow is chosen as location of his own sign for the game.

4.4. Conclusion

The elbow-signs he uses referring to the game undergoes a transformation from

(1) the experienced THIS-SENSATION^PLACE

supported by the conducting gesture into a more generic reference in

(2) the conative “more of the SAME-SENSATION^PLACE”,
and transforms further in his emotional evaluation and recollection into a reference to the whole nursery rhyme as

(3) “this SAME-SENSATION^PLACE that induces an inner state LIKE-THIS-INNER-STATE⁴⁰”.

In the end it incorporates the whole rhyme, including the sensations, places and inner states attached to it.

The reference mode thus indicates a gradual transformation of the here-and-now experience into a more detached referential modus. From being a mere THIS-ness the referred undergoes a transformation into a distinct constant SAME-ness, and then into a metonymic icon/index capable of referring to the whole game (the narrative, the episodic experience) or aspects of it, such as the emotion, the anticipation, or the climax.

4.5. Intermezzo on ritualisation

This transformation has striking resemblances with what Roland Posner terms *ritualisation*. In his analysis of “the Central-European gesture which is known as shaking one’s hand, i.e. a vigorous shaking of the hand sideways in front of the upper body” (Posner 2002:7), a gesture that according to Posner develops from the child burning his hand on something hot into signifying very abstract relations to “the ambivalence of attraction and fear” for adult users, he shows that this emblematic everyday gestures of shaking one’s hand undertakes a ritualisation in 6 stages:

- (1) Self-oriented body movements produced with a physical purpose.
- (2) Other-oriented body movements (self-referential and predicating, with an expressive function).
- (3) Denotation of the pain-causing object (as well as concrete predication with an assertive function, and comment on the effect).
- (4) Designation of a potential cause (as well as abstract predication with a directive function)

⁴⁰ The reference modes, THIS, SAME, and LIKE-THIS, are explained in the chapter 5. **The Proto-sign.**

- (5) Domain extension (as well as abstract predication and unrestricted choice of functions).
- (6) Domain change and metaphoric or metonymic predication.

If we compare the transformation of La's elbow-gesture with the analysis of Posner, we might at first glance suspect that the elbow-gesture follows the stages 1-4, if only changing the 'pain' of burning into the 'joy' of the game. However, several very important differences in the development of the two gestures are evident.

First, the hand-shaking gesture has, according to Posner, to be taught. He writes:

"This behavior is already the result of a previous learning process. In such a situation a very small child is not able to act in a purposive way. He/she is helplessly subjected to the pain, moving the limbs in an uncoordinated way and screaming for the mother or the babysitter to alleviate the pain. It is these persons who teach the child to cool the burnt finger by

- *shaking the hand in the air and*
- *blowing air on it.*" (Posner 2002:8)

The elbow-gesture is not a learned gesture, but is negotiated (as we saw) into a referential sign from being a spontaneous gesture from the child itself.

Second, the elbow-gesture is not, as it is the case with the hand-shaking-gesture, derived from "a movement with a physical purpose"; it is rather derived from *a movement with a cognitive purpose*.

Third, although the elbow-sign might designate a "potential cause" (c.f. stage 4) and have an "abstract predication with a directive function", it is clear from my analysis of La's use of the gesture during the negotiations, that in addition it is used with illocutionary force and metonymic predication; two characteristics that Posner only find in the fifth and sixth stage of ritualisation, but here are found at the very onset of the ontogenesis of the sign.

These differences might be due to Posner's application of the term ritualisation. He re-attributes this term to "human ethology" from biology, and doing so he misses one very important point in human signification practices, namely the active and conscious *negotiation* of the sign, based on the very nature of human cognition: being situated in a phenomenological body with a semiotic mind. The initial use of the elbow-gesture is not performed in order to "alleviate the pain" (op. cit. p. 8) or have any similar "physical purpose", it is first and foremost a schematised (metonymic)

representation of the experience that the child uses in the process of cognising this experience. It starts out as a *thinking-sign*⁴¹ or *epistemic sign*.

This very important difference between ritualisation and negotiation will be even clearer from the following investigation into the phenomenology of cdb children creating representations from bodily-tactile experiences in negotiation with grown-up partners.

⁴¹ C.f. Nafstad & Rødbrøe: "Sådanne udtryk ser ud til først og fremmest at forkomme som tænketegn eller udtryk for mentale forestillingsbilleder". (p.35)

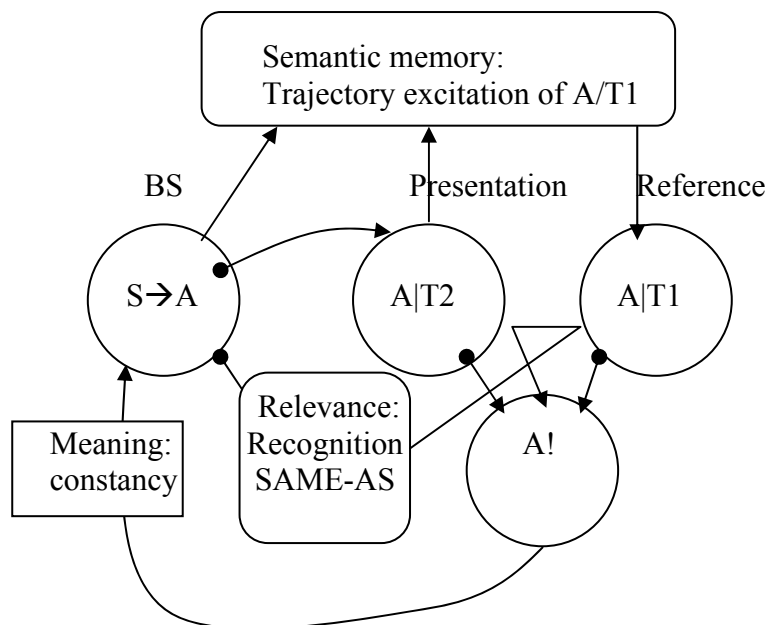
5. THE PROTO-SIGN

In this chapter I will make an attempt to describe the phenomenology of tactile signs that are not yet conventionalised through negotiation. I will use the term *proto-sign* to refer to these *signs in the making*. Based on this phenomenology I will propose a *typology* of these gestural signs used for negotiating meaning tactilely. This chapter will draw on the findings of the whole thesis, but the presentation will attempt to be as independent of the analyses in later chapters as possible.

5.1. Signs in the making

As we develop an understanding of the surrounding world in infancy, we develop semantic memory. Realising that something is the same thing as we have seen before is the first instance of semiosis: The mothers voice, her face, the shared object, all signifies themselves when they are remembered as new instances of ‘the same’. Without the semiosis, recognition of the mother as well as constancy of an object would not be possible. Anything experienced would be new and unrecognisable – the world would be utter flux. Luckily we are capable of integrating our experiences of the world as trajectories in our brain, thus creating order in the perceptual chaos.

Fig. 5.1. Memory



This order is created through rhythmic interaction with the world. In the beginning we interact in patterns of emotional attunement with the primary partners (e.g. the parents) and later, while developing motoric skills, we elaborate our semantic understanding by investigating the physical world.

In regard to children with cdb the stimuli required for creating this semantic memory are very limited. The phenomenology of the perception and semiotic integration by cdb children is the main concern of this chapter.

The term proto-sign is proposed here to account for various gestures used as iconic, metonymic or other signs that are developed directly from bodily experiences, but not yet negotiated into conventional symbolic signs⁴². Signs like LIKE-THIS-MOVEMENT^SAME-PLACE(rubbing-the-leg) do not *mean* the movement, but refer to some experience by the iconicity: my rubbing IS LIKE that other rubbing, and further by the metonymy: *that* other rubbing IS (part of) the act of the dolphin rubbing my leg. In this example taken from the sequence analysed later, in the chapter **6. Th and the dolphin**, the combined proto-sign is referring to a specific act of the dolphin. The dolphin itself is already established as the topic of the conversation through negotiation.

Another possibility is to transcribe the sign according to how it is performed, thus transcribing this sign as RUBBING-THE-LEG or UPWARD-STROKE-ON-THIGH. I have chosen not to do so, in order to distinguish between signs with conventional or already negotiated symbolic meaning, and signs without such conventional core meaning. The movement itself is only a small part of the meaning of the sign. What these proto-signs are capable of is to refer by iconic or metonymic means to contents of a specific shared mental space. The meaning of the sign is an integration of knowledge and schematics derived from the situation and from the content of already established mental spaces, negotiated in the ongoing conversation. In this case the reference is a passive⁴³ experience of the active dolphin.

⁴² This use is more in line with Trevarthen's (1990) notions of preespeech, proto-gesture (p.701) and protoconversation (ibid p.698ff) than with his use of the term protosign (ibid p.716ff). I suggest the term protosign to be used for the signs of the proto-sign-language based proto-conversation as well as for gestures suggested as signs or expressing language-like sign functions.

⁴³ Passive only in linguistic terms of course. The experience and the cognition of it are hardly passive. C.f. the previous chapter and his conducting gesture and thinking sign.

The proto-sign is thus the carrier of the schematics of the reference, and have to be supplemented by a description of the actual movement. LIKE-THIS-MOVEMENT is thus the transcription of both the iconicity and the metonymic aspect of the sign, while the addition (rubbing-the-leg) carries the description of how the sign is performed⁴⁴.

These choices have been made in order to focus on how the signs become significant. In the example above, the transcription makes it clear that a lot of the meaning is to be sought in the context. A proto-sign is in this sense very similar to the pronouns of verbal languages. ‘This’ and ‘that’ are very empty entities out of context, and so are proto-signs. The meaning of proto-signs may be obvious for the participants of a conversation, but in many cases the meaning is distressingly evasive. In these cases a better understanding of the schematic nature of the proto-sign might help the understanding.

In order to capture the distinct means of reference in the transcription when encountering new, not yet negotiated signs, I have tried to categorise the ones I have come across while analysing the video sequences according to their modes of reference. In this way, the specific reference of the proto-sign is not presupposed in the transcription. It is thus up to the analyst to find the exact meaning of the proto-sign by considering both contextual and biographical knowledge⁴⁵. This has resulted in a typology of what I term proto-signs. A number of such proto-signs have been derived from the analysis in this thesis. No claim is made here that this be the complete inventory of possible proto-signs in cdb communication, but I do suggest new proto-signs to be tested for their resistance against being reduced to the ones proposed here. I have found two parameters (I-II) by which the signs are characterised.

I. The four tactile/bodily topoi of perception:

II. The three reference modes.

⁴⁴ A more precise notation is suggested in the graphic notation (appendix III) where the sign-locus (+SL-leg) and the topology of the gesture (+downward-stroke, +upward-stroke) are specified in order to perform the microanalysis of the sign. This very elaborate notation, which in addition includes hand-positions and emotional face expressions, is important when analysing the conversational negotiation, but can then be abbreviated into the format (rubbing-the-leg) in the more language-like transcription (c.f. the chapter **6. Th and the dolphin**).

⁴⁵ A suggestion to how this may be done is given in the chapter **6. Th and the dolphin**.

This first preliminary typology presented in this chapter will be based on these characteristics.

5.2. The four bodily/tactile topoi of perception

We have three main sources of inputs to the brain. One is our sensory system taking up information (exteroceptive impulses⁴⁶) that meets us from the outside of our body. The second is information (proprioceptive impulses) from kinesthetic sensory cells in the motor and balance systems of the body. The third is the remaining somatosensory system that reports of inner states providing us with information (interoceptive impulses) about emotional arousal, hunger and the like. Another important source is consciousness and the cognitive apparatus. Development of new signs is based on such schematisation capacities, as I have shown in the analysis of the thinking sign in the previous chapter.

Normally the distal senses (sight and hearing) are the most prominent sources of exteroceptive inputs to the brain. For children with cdb the importance of these impaired senses vary from zero relevance to some degree of support for the other sensory inputs most importantly the tactile. This forces the analyst to concentrate on how tactile, kinesthetic and somatosensory information is perceived, cognised and expressed. The three sources of input generates a set of four perceptual topoi:

I. The four bodily/tactile topoi of perception

- A. *INNER-STATE*: Perceived inner state (emotions, hunger etc.) (interoception)
- B. *MOVEMENT*: Perceived motion (proprioception)
- C. *SENSATION*: Perceived tactile sensation (exteroception)
- D. *PLACE*: Perceived location (proprio- and exteroception combined)

How are new signs generated from these experiences? My claim is that a set of proto-signs are structuring the process. According to the four topoi I have divided the signs into four main groups of signs (A-D) that act differently in the categories (1-3) suggested below.

⁴⁶ The terms 'exteroceptive', 'proprioceptive' and 'interoceptive' are taken from Brodal (1995) p. 195.

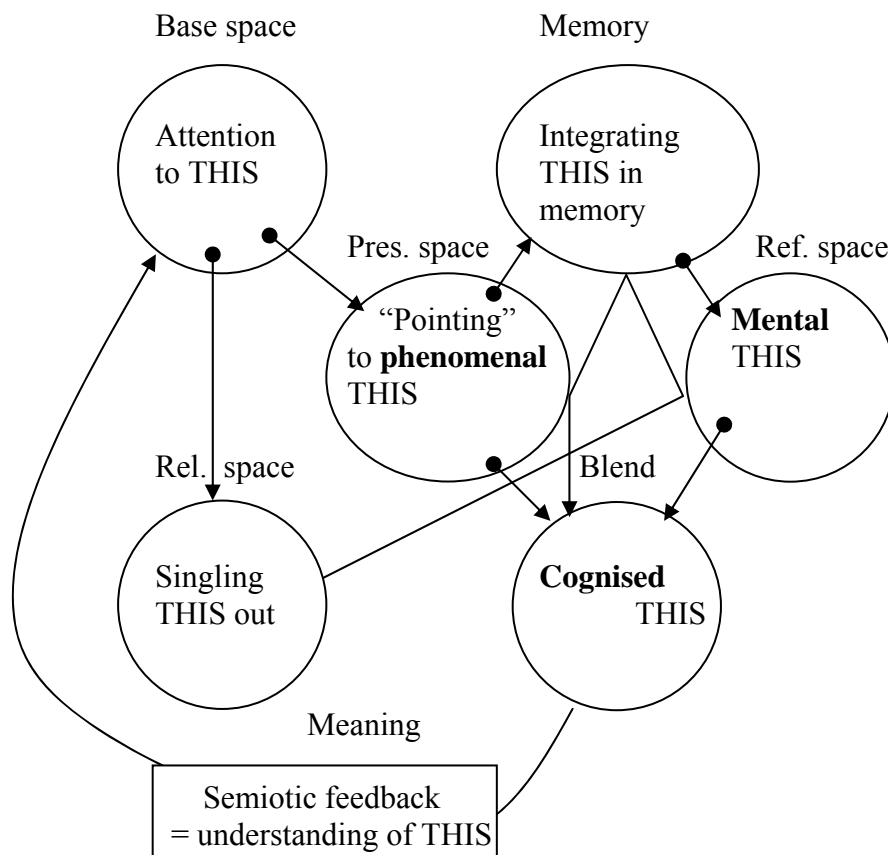
5.3. The three reference modes

The signs discovered in the analyses of this thesis fall into three categories. The first is characterised by *singularity*, the second by *constancy* and the third by *analogy*. Proto-signs are referring to one of these three aspects of the perceived entities.

5.3.1. THIS-ness

The first category is the category of the first instance of hesitating and singling out a reference point in the flux of the world. These signs are used in the process of cognising some entity as a relevant object of focused attention. The singular occurrence is where the identity of an object, a movement or an emotion is grounded. I term this attention towards a present object, when referred to by a sign, *reference by THIS-ness*. The mental network of this reference mode is shown in figure 5.2.

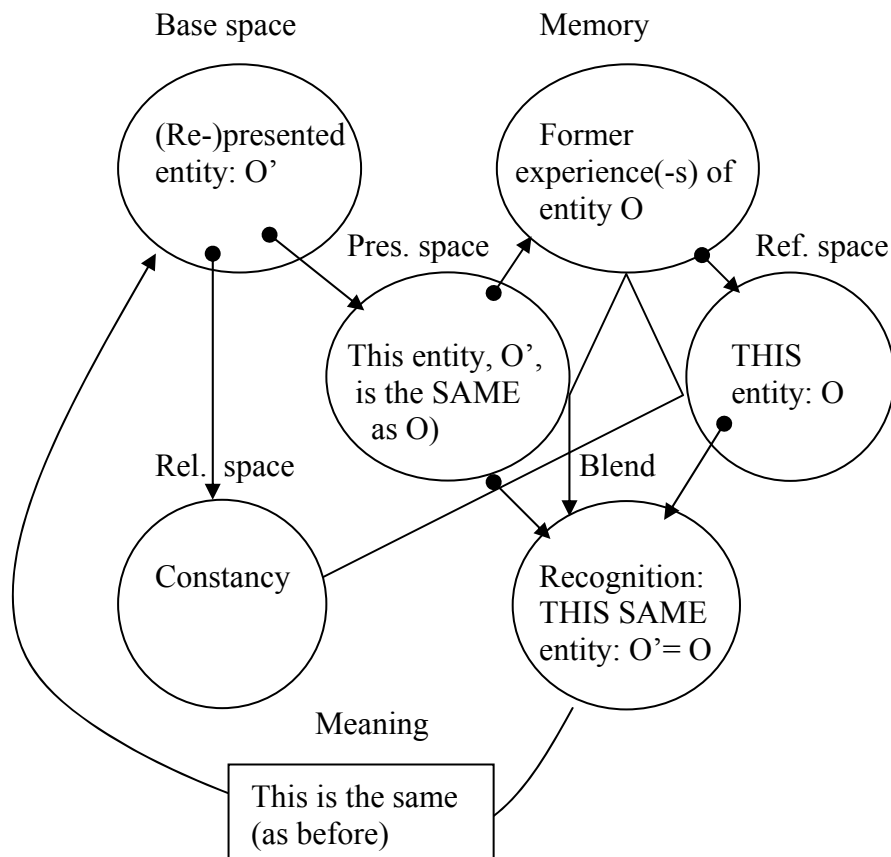
Fig. 5.2. THIS-ness



5.3.2. SAME-ness

The second category is used to focus on the aspect of constancy. If a perceived entity reoccurs according to some regularities, we say it has constancy. The entity is the SAME as before. SAME-MOVEMENT is a repeated motion pattern performed in the SAME significant way in the past. SAME-PLACE is referring to specific (constant) locations of significance. The movement can be specific according to the act or to the object of the act. In the latter case the transcriptions SAME-SIZE or SAME-SHAPE are used. More of these specifications are likely to be discovered in future research. The movements and locations are used as signs in the situation because they are referring to identical objects, movements or places in the present mental space of the child. SAME-INNER-STATE and SAME-SENSATION are in line with this, referring to some identical inner state or sensation. This reference mode I term *SAME-ness*.

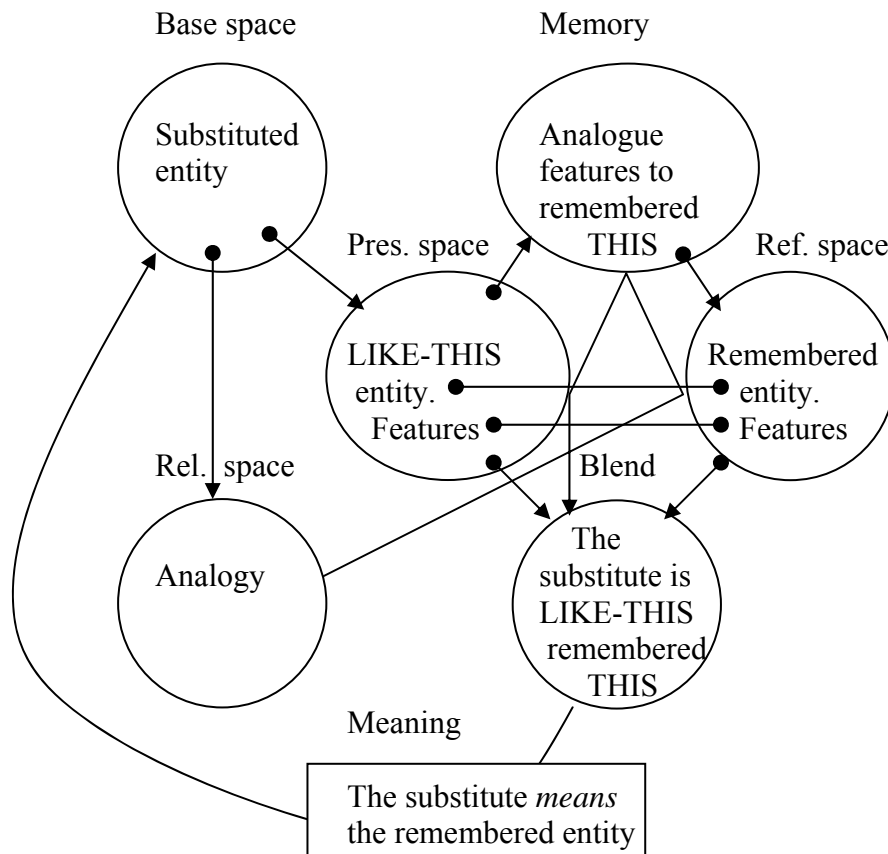
Fig. 5.3. SAME-ness



5.3.3. LIKE-THIS-ness

The third category consists of signs that are used to refer to *analogous* acts or locations. For example, a pointing-to-the-head gesture can, if functioning as the proto-sign: LIKE-THIS-PLACE+SL-head, refer to a head not present in the situation by the reference mode: *LIKE-THIS-ness*. The head in the situation refers to another analogous head in a mental space specified by the ongoing conversation⁴⁷. When dealing with yet not conventionalised proto-signs I will stick to the definition ‘analogous to a not present entity’.

Fig. 5.4. LIKE-THIS-ness



⁴⁷ Whether or not this is a reference to the generic type ‘a head’ is a matter of discussion. At a seminar summoned by DbIWGC at NUD in Dronninglund the participants engaged in a lively discussion on whether or not cdb children have a conception of nominals at all. I will return to the problem of generic basic category signs of the type THIS-KIND in the final chapter dealing with future research.

5.4. Typology

A set of 12 proto-signs can be derived from these two parameters:

1. Referred THIS-ness – Reference by singularity

(The proper name. Addresses directly)

- A1 THIS-INNER-STATE; emotional expression here-and-now.
- B1 THIS-MOVEMENT; perceived/contemplated movement here-and-now.
- C1 THIS-SENSATION; perceived/contemplated tactile sensation here-and-now.
- D1 THIS-PLACE; perceived location here-and-now.

2. Referred SAME-ness – reference by constancy

(The definite article. Directs attention)

- A2 (The) SAME-INNER-STATE (as this); reproduced emotional expression.
- B2 (The) SAME-MOVEMENT (as this); repeated movement.
- C2 (The) SAME-SENSATION (as this); reproduced tactile sensation.
- D2 (The) SAME-PLACE (as this); reference to identical location.

3. Referred LIKE-ness - Reference by analogy

Indicates membership of same category

(The indefinite article. Refers “indirectly”)

- A3 LIKE-THIS-INNER-STATE; refers to inner state by analogy
- B3 LIKE-THIS-MOVEMENT; refers to analogue movement.
- C3 LIKE-THIS-SENSATION; refers to analogue sensation.
- D3 LIKE-THIS-PLACE; refers to analogue location.

It is suggested here to ascribe emotional expressions for anger, frustration, pain etc. to a separate group of signs (A). The proto-signs of this group express the bodily experience of somatosensory inputs. An example of this would be Th's bidding-hand-and-stomping-foot gesture, expressing frustration. This is both a spontaneous expression of emotional distress, and a negotiated sign for expressing distress of various kinds, and it is ascribed accordingly to two different categories. In the first case the sign falls in the category A1 (THIS-INNER-STATE+frustration) in the latter case in the category A3 (LIKE-THIS-

INNER-STATE+frustration). For further description (bites-hand-and-stomps-foot) might be added in both cases. This example shows additionally that proto-signs tend to carry along their generic category past the point where they are negotiated into conventionalised sign. If the sign was truly a conventionalised sign (and not a proto-sign), it could merely be transcribed FRUSTRATION. This would require that the sign FRUSTRATION could be used outside a direct emotional state to refer to it symbolically; just like the word 'frustration' can be used without the speaker being presently frustrated. In this case the sign has no such symbolic value, and is best transcribed LIKE-THIS-INNER-STATE+frustration(bites-hand-and-stomps-foot).

In the sequence with La and Mo engaging in an English nursery rhyme the song is accompanied by Mo squeezing his arm and tickling him. La spontaneously grabs the spot on the arm where Mo has just squeezed him. This is not yet a sign referring to the experience, but merely a way of cognising the sensation in a tactile manner. Nafstad (1999) is describing this process as "*konstruktiv og kreativ kognitiv bearbejdning*"(p. 16) and later states that "*Sådanne udtryk ser ud til først of fremmest at forekomme som tænketegn eller udtryk for mentale forestillinger*"(p. 35). In other words, La is at this stage still just experiencing the game. THIS-SENSATION+contemplation might be a way of transcribing this sign.

This is the argument for a third group of signs (C1), closely related to (A1), but without the emotional meaning.

The signs in this category of signs *confirming experience* are only addressed to the child himself as a kind of inner monologue, a contemplation and confirmation of the experience. This sign is not intended as a sign, but becomes a sign for the adult, because of its visibility. This kind of signs seems to be fundamental for creating new signs. It functions as a coding processor, just as when you say a phone number out loud, when trying to remember it.

By repeating the game and waiting for La to grab his arm, Mo helps La in creating a proto-sign, which later on may be stabilised into a conventional sign for playing this particular game. At this early level of the negotiation of the sign, this stabilisation has not yet occurred, but it is now already a proto-sign by which Lasse is able to ask his mother for one more go of the game. The proto-sign he uses is SAME-

SENSATION^SAME-PLACE+arm+imperative. The location is still the same – it has constance - thus SAME-PLACE.

The sign is not SAME-MOVEMENT, even though the movement originally performed by the mother is reproduced by Lasse. SAME-SENSATION means ‘it felt like this’. The reference is made by reproducing the sensation on his own skin. The sign reproduces the sensation of the (actively) remembered bodily experience, and thereby makes a reference to the experience. ‘This sensation’ of the experience is referred to as ‘that experience’ by the proto-sign SAME-SENSATION. La wants more of that sensation.

5.5. Outro: In this chapter I have

made an attempt to describe the phenomenology of the proto-sign as consisting of the three reference modes THIS-ness, SAME-ness, and LIKE-THIS-ness, and of the four perception topoi INNER-STATE, MOVEMENT, SENSATION, and PLACE. Based on this phenomenology I have set up a typology of 12 such proto-signs. In the next chapter I will show how conventionalised signs depend on their origin as proto-signs, and how an enhanced focus on this aspect of cdb communication might help the adult partners when trying to understand the utterances of the cdb children.

6. TH AND THE DOLPHIN⁴⁸

In the first part (6.1.) of this chapter I will suggest a way to describe the meaning of negotiated tactile signs as “something like words”. I will show how the understanding of the semantics of a sign is highly dependant on knowledge of the episodes in which the sign was negotiated originally. Relying on this trust of semantic potential I will suggest a way to transcribe and translate the signs used in the conversation analysed. The core semantic meaning of such signs are different from what we would intuitively use as *tags* for the signs, because their origins as proto-signs has to be taken into consideration when deciding on what core meaning is to be ascribed to the single sign.

In the second part (6.2.) I will show, by means of CA methods, how these signs are structurally tied together in the coarse of a sequence. I will show how the suggested understanding of the core semantics of the signs is a prerequisite for understanding the single sign in context. We will see how conversational negotiation may support a sequential step-by-step negotiation of “something like syntax” – namely the structured building of a shared mental space. I will show how the analysis of this syntactic structure must be build on knowledge of the semantic potential that is invested in the signs through their histories of negotiation.

Before taking on these tasks, I will give an overall introduction to the sequence that will be the basis of these analyses.

The analyses in this chapter are based on a conversation between the cdb⁴⁹ boy, Th, and his teacher M⁵⁰. Th is in this sequence supposedly⁵¹ cued by a dolphin-like noise made by a visiting boy to remember an experience he had six months ago, where he was bathing with dolphins in a so called therapeutic dolphin session. M, his teacher, thinks that a sign made by Th (before video recordings were initiated) might refer to the

⁴⁸ This chapter is in part build on the same material as an article (work in progress) by this author and Anne Nafstad. The chapter can be read as a status-report on the work to be presented later in that article. When nothing else is noted, the analyses presented here are my own.

⁴⁹ Th is congenitally blind with only a slight capability of sensing light that disappeared in early infancy. It was never enough to distinguish faces. He has a severe functional hearing impairment (source: Anne Nafstad dixit).

⁵⁰ Video sequence I,ii and transcription II,ii. See also appendix III and IV.

⁵¹ M’s assumptions reported here are based on oral reports from herself to Anne Nafstad and the author. M also comments the ongoing conversation on the video.

dolphin-experience. She therefore engages in a conversation with him, encouraging him to tell about the experience.

Th willingly participates in this, and in the beginning he uses his vocabulary of already negotiated signs to tell about something that is going on in a water scenario. His vocabulary is restricted to about 120 signs⁵², and he is therefore forced to use the signs in a creative manner. He uses the signs known to M as BATHE (BADE)⁵³, WATER (VANN), and WASH (VASKE) to set up the scenario of an experience in or with water.

By way of co-referential repetitions⁵⁴ of Th's signs M manages to maintain the flow of the conversation up to a certain point (ca. line 20-21), but then a lot of misunderstandings occur. The communication is of varying success after this, and shifts from glimpses of (supposedly) full understanding, expressed by Th's enthusiastic excitement, to distressful breakdown both in understanding and of contact, where Th expresses great frustration.

From that point on, a lot of such misunderstandings occur. This chapter will be concerned with microanalyses of selected sub-sequences of the conversation in order to find out what went wrong and why.

6.1. *Something like words*

The new signs that children with cdb create are, for the most parts, created from bodily experiences in the manner we saw in chapter 4. In many such cases the distinction between actor, act and object is not always clear, or even relevant. Sometimes the actor and the act are not easily distinguishable, sometimes this is the case with the act and the object, and yet some experiences might involve a close relation between the actor, the sensation of acting, the sensation of the object, and the object itself. Cognitive semiotics provides some very useful terms to account for these three different modes of perceiving interaction, and thus cognising, an act: The active (as in 'I touch this' or 'I jump'), the passive (as in 'I'm touched by this' or 'it touches me'), and the intermediate ('it feels like this'). Most of the signs can accordingly have both nominal and verbal meaning depending on the context, and thus I have chosen to transcribe them into

⁵² See appendix V(i).

⁵³ I have given here the English translations and the original Norwegian "tags" (in parentheses) as Nafstad has collected them from the family and teachers of Th (see appendix V(i)). The problems concerning the use of such intuitive "tags" will be discussed later in this chapter.

English by the *-ing form* that may have both gerundive and nominal meaning, as in example (d) below.

This ability of a sign to move between nominal and verbal meaning according to the given context is a common feature in natural languages to various degrees. Different word groups express the different perspectives of the same core meaning in different ways. The following (English) sentences are examples of such different perspectives on a single semantic core.

- Examples⁵⁵:
- (a) ‘the sailor sails in a boat with sails’
 - (b) ‘the runner runs a homerun’
 - (c) ‘the batter bats with a bat’
 - (d) ‘I was running, when...’, ‘I enjoy running’

The English infinitive (e.g. ‘to run’) has too much of a verbal sound to it for it to fully serve the purpose of indicating both the verbal and the nominal meaning (e.g. of ‘running’), thus the *-ing form* has been chosen for transcribing the core semantics of the conventionalised signs, as WASHING, DRINKING and EATING. This choice has an important support in the history of negotiation of the signs. Most of the signs in the analyses of this thesis are negotiated from bodily experiences where the distinctions between the act, performing the act, and the actor are not always clear.

6.1.1. Core semantics: VANN or WATER-PLAYING

To illustrate why this choice is important the following example from the conversation between Th and M has been chosen. One of the signs that are used in the beginning of the conversation is the sign M tags WATER (in Norwegian: VANN⁵⁶).

This tagging (or translation) of this particular sign (slapping the back of one open hand with the other hand’s open palm) has one major problem: Th never uses this sign for the substance ‘water’. The sign originates⁵⁷ from a ritualised game by a sink

⁵⁴ See chapter 4 (e.g. fig. 4.4.).

⁵⁵ These examples are made up in order to illustrate the different *meanings* of the words. I make no claim that these *sentences* are likely to occur in actual language.

⁵⁶ See appendix V(i) tag no 113.

⁵⁷ Knowledge of the origins of the signs in this conversation is a part of work by Anne Nafstad (2003) that is not yet published.

where water was pouring over Th's hands and he was slapping the surface of the water in the sink. Possibly, slapping of the surface in a pool as a means for regulating proximity to a teacher is also a source for the meaning of this sign. Th normally uses the sign as a request for playing with hands in water, or when telling about playing with hands in water. The *core meaning* of the sign is thus not the substance 'water' as we would conceptualise it, but rather the whole experience of 'joyfully slapping on surface of water and making it move'. I have therefore chosen to translate the sign into WATER-PLAYING. We will later (in 6.2.) see how the aspect of 'making water move in a joyful manner' is very important when trying to understand what Th means in this particular conversation.

6.1.2. VASKE or WASHING-SMOOTH

Another aspect of the history of negotiation, which is important when determining the meaning of a specific use of a sign, is the different features of the experience that are equivalent to the perceptive topoi of the proto-signs⁵⁸. As an example of this, I have chosen the sign WASHING (VASKE). The following utterance is from the conversation between Th and M. Th is talking about the dolphin:

Transcription:

WASHING [...] LIKE-THIS-MOVEMENT((leaning-across-the-table))^LIKE-THIS-SENSATION((sliding-hands-across-the-table)).

Translation attempts:

- (a) *Table-size and Wash-smooth as table-smooth*
- (b) *Wash-and-table-smooth table-sized surface*
- (c) *Touching-like-washing the table-sized-and-table-smooth surface*
- (d) "Touching the big smooth surface (of the dolphin) felt like washing it"

The attempts (a-c) are the most direct "translations" of the utterance. The way the smooth sensation of washing and the smoothness of the table are associated with touching the smooth dolphin is what generates the blend of the three inputs. Attempt (d)

⁵⁸ See chapter 5.1.

is better English, but doesn't capture the meaning of the proto-signs. The key to understand the right feature of the negotiated sign WASHING, is understanding *the intermediate perspective* of the act. WASHING feels like this (smooth). This intermediate perspective is carried on from the sign's origin as the proto-sign: LIKE-THIS-MOVEMENT(rubbing)^LIKE-THIS-SENSATION(smooth). The "right" translation (e) is based on the intermediate perspective on the act of touching the dolphin:

(e) "The dolphin was washing-smooth".

6.1.3. A dictionary of negotiated signs

In order to understand the signs we need more than just the intuitive tags. We need a dictionary that takes into consideration the complexity of the histories of negotiation of the signs. The dictionary should not be a lexical normative (because the background knowledge of the meaning is *asymmetric*), but rather a source of semantic potential (investigating what is included in the *shared reality*). The following format is what I suggest as a minimum for such a dictionary.

1. **Core meaning:** the core semantics of the sign when considering the asymmetric knowledge of the world and trying to take the cdb child's perspective.
2. **Origin:** (a) first introduction (where, when, by whom, how, etc.) and (b) early history of negotiation.
3. **Ordinary functions:** negotiated meaning in specific situations. E.g. as negotiated in routine situations, but also other more creative uses in non-routine situations, if these occur.

Example:

(BADE) **BATHING**; **Core meaning:** Joyful (comforting) experience of the whole body being embraced by water: BATHING. **Origin:** The exact origin and early history of negotiation of this sign is not known. Never the less, knowledge of Th's experiences with this variation of a water scenario provides a means for understanding the experiential source of the sign. When Th started at the school for deafblind children at the age of seven, he was very insecure in this new setting. However, in the swimming pool he felt safe surrounded by the water as he was. He spent a lot of time there. He learned how to walk on his own, and how to control the availability of another person (the teacher) over distance, regulating proximity by feeling and manipulating the movement of the water. **Ordinary functions:** Speech acts: *Request* for having a bath (in a tub, pool or the like) (e.g. to ease pain); *confirmative* answer to a *suggestion* to have a bath; *Inquiring* if

someone is bathing. Referential: *Telling* about someone (a person or an animal) bathing (e.g. in ritualised story telling scenarios).

A full dictionary of the signs used in this particular conversation is suggested in appendix V(ii)⁵⁹.

6.2. Something like syntax

As the example of WASHING-SMOOTH above has already suggested, the combination of signs in the ongoing conversation is what determines the meaning of the signs. This chapter suggest a way to understand this combination of the signs as ‘something like syntax’.

6.2.1. Series of holophrases or combinations of signs?

A common mistake when trying to understand cdb utterances is to understand each sign as a holophrastic one-word-utterance condensing a whole syntactic structure in one word.⁶⁰ In doing so, the adult will try to complete the utterance, but the knowledge underlying the common intuitive practice is likely to prove insufficient, because the adult’s perspective⁶¹ provides her with a range of assumptions fundamentally different from that of the cdb child. The relation between their experiences of the world is asymmetric.

A very educating example of this is the sub-sequence in line 39-50 where Th and M are negotiating the meaning of the sign she tags HOLE (HUL) combined with Th pointing to her head.

```

39      M:      (→*) >YOU/"du" TALK/"du snakker"< "om s  n?"/*JUMPING  HOLE*
40              (with one pointing finger hitting hard in palm)
41      Th:      HOLE      [HOLE
42      M:              ["hva er det for noe hul?"
43      Th:      'POINTING' (tries to point to the head of M)
44      M:      (→*) HOLE/"hul?"
45      Th:      (→*) POINTING-TO-THE-HEAD(of M)
46      M:      POINTING-TO-THE-HEAD+coactive/"Ska jeg t  nke godt - inde i
47              hovedet?", I/"ska jeg" POINTING-TO-THE-HEAD/"t  nke godt?" ( . )
48              JUMPING/HOLE(=DOLPHIN??)/"eller t  nker du p   delfinfisk" ( . ) WATER-
49              PLAYING/"i vandet" ( . ) JUMPING/"der hoppet?"

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⁵⁹ This dictionary is written in collaboration with Anne Nafstad.

⁶⁰ C.f. Tomasello (2000) p.65ff. on holophrases, and Nafstad (1992) on this common mistake.

After a break in the conversation, where Th has been leaning back and away from M, she tries again to make him remember the sign he started out with. Verbally saying “you (meaning: hey you, listen), are you thinking about – such?” while making the signs she knows as YOU (DU) (pointing to Th), TALK (SNAKKE), and the new sign which she performs by hitting with one straight finger in her palm – transcribed here as *JUMPING◇HOLE* - a sign she believes is a suggestion for a new sign for dolphin. Th answers this by the sign HOLE and tries, unsuccessfully, to point to the head of M. She is intrigued by this new⁶² introduction into the conversation, and while Th tries to point to her head she asks “What is it with this hole?” - and thus the point Th is trying to make with his combination of the two signs eludes her.

She makes a co-reference to HOLE, and Th tries again with his pointing gesture. This time M notices the gesture, and interprets it as a request to think thoroughly: “Am I to think well? – Inside the head? Shall I think well?” she asks as she repeats his sign in what she believes is a co-reference.

This interpretation seems intuitively to be coherent. The conversation has broken down, and this leads M to consider this very breakdown as a relevant topic for Th to address. But this is a cognitively and linguistically very complex thing to do for a cdb child with not more than 120 “words” in his “vocabulary”. In this situation to say “think” would compress something like “Now listen to me, the conversation is broken down, because you don’t understand what I’m saying. This requires some meta-reflection on the conversation and the negotiation of meaning in order to overcome this mishap – we both know that. Therefore I ask you to think well, and try to figure out anew what I mean.” In everyday conversations between people who use the same natural language such a condensed speech act would be a very normal and efficient way to overcome a breakdown in the communication. However, Th does not accept this intuitive interpretation, if we judge from his frustrated outbursts directly following the sequence and from his eagerness to reintroduce the pointing-to-head gesture in different constellations with various other signs during the rest of the conversation.

⁶¹ Perspective in a phenomenological sense as in Merleau-Ponty (1945) pp.67-72.

⁶² Th actually tries to introduce this sign from the very beginning, but this is not recognised by M. See below.

M misses the combination of the signs, and this is why she has no chance of understanding the intended meaning of the signs.

6.2.2. Sequential syntax: Mental space delegation by sequential negotiation

I will return to this particular utterance, but firstly, I will establish how Th combines signs in order to make M generate elaborate mental spaces.

As the grammatical structure of Th's signing is not yet described, the analysis of how the thematic units configure coherent mental spaces is a way to clarify the structural (syntactic) relations between the signs.

In order to understand how this meaning is negotiated into being, I will analyse the structure of the turn-taking. I will import the findings from CA as if they were valid in cdb conversation, and investigate what similar structures are active. This will clarify how the elements interrelate, and how the whole structure is stabilised.

Let me start from the beginning of the conversation. The following sub-sequence⁶³ is the first *thematic unit* on the video.

T1	M:	TELL-MORE	((Rq1)) ⁶⁴
T2	Th:	BATHING(x4)	((A1: I1: frame))
T3	M:	BATHING	((as-if C1))
T4	Th:	FTT >HOLE< >HOLE< BATHING(x4)	((I2: subject predicate, RI2, RI1: frame))
T5	M:	BATHING(x2)	((CR1, no CI2!!))
T6	Th:	BATHING(x4)	((RI1: resignation))

The first *turn* (T1) is a request (Rq1) from M encouraging Th to keep talking. The video recording started right after Th had made the new sign that M believes refers to the dolphin (see above p.57f). Th answers (A1) this request by introducing the first thematic sign: BATHING. This first *adjacency pair*⁶⁵ ({Rq1, A1}) is performed without any *marker* – the answer is a *preferred second*.

⁶³ This transcription deviates a bit from that in appendix II(ii). I have left out the oral comments in order to focus on the tactile signing, and the new improved notation technique that Nafstad and I developed in Skådalen (c.f. note 15 and appendix III) have made the transcription more precise.

⁶⁴ The abbreviations used in this chapter are listed in appendix IV no. 25-32.

⁶⁵ The CA-terms used in this chapter are all explained in chapter 2.2.

In T2 Th introduces (I1) the sign BATHING into the negotiation. M answers in T3 this introduction by imitating his sign, thus confirming her understanding him with a co-reference (C1) to his sign. This kind of *immediate imitation* of each other's signs has been found to be a main source of the co-construction of social interaction with hearing and seeing as well as cdb children (Nadel 1999)⁶⁶.

In this case the co-reference is an as-if co-reference, because the imitation is produced as-if she understands the meaning and purpose of his utterance without necessarily understanding it in full. This act of as-if co-reference has been found to be a way to maintain a flow in conversational interaction with cdb children – a flow that is necessary for the co-construction of language skills (Daelman et. al. 1999, Vonen & Nafstad 1999 and Nafstad & Vonen 2000).

In conversations with cdb children who only have a very limited set of conventionalised signs (like Th) this structure of introduction (I) and co-reference (C) is a very closely connected pairing, with a function in the structuring of the turn-taking equivalent to the functions of interactional feedback known from CA. I suggest that this kind of interactional feedback in cdb conversation (if generalised from Th's case) is formalised into a special cdb adjacency pair. In line with this the introduction of a sign “needs” a co-referential confirmation. Thus {I1,C1} is such an adjacency pair. The fulfilment or lack of fulfilment of this “need” is what establishes the flow and variations in the flow. The analysis of this flow reveals if the understanding of the signs is transferred in the communication. In my opinion, this equivalence justifies the import of the term adjacency pair into the analysis of the co-referential sign. We shall soon see what happens when this “need” is violated.

Being assured of M's understanding by the co-referential sign, Th eagerly (c.f. the FTT) continues to elaborate on his explanation. In T4 he introduces a second sign, HOLE (I2), in combination with a repetition of I1 (RI1). According to the dynamics of the adjacency pair, T5 should then be a co-reference to the introduction I2. M seems to overlook the new sign, and only repeats the co-reference to BATHING. The result is that Th in T6 resigns from further elaboration, and simply repeats BATHING.

In order to understand what mental space these signs are meant to build, we have to look at them in combination. Doing so I suggest that I1 is an introduction to a frame –

⁶⁶ See also chapter 4 for an analysis of co-reference..

in this case a bathing scenario. The adjacency pair {I1,C1} stabilises the frame. Then Th tries (but fails) to introduce a characteristic tactile feature of something in that frame, namely a hole-thing. The whole sequence can thus be understood as the nominal syntagm with a subject and a locative (S.th + frame) meaning something like “hole-thing in bathing-scenario”. When M in T5 fails to confirm the subject, the flow of the conversation is broken, and Th’s T6 is a resignation on I2 and a return to original frame I1, as if thinking “I tried to bring in the hole-thing, but at least lets maintain focus on the agreed upon scenario of bathing.”

M senses this break in the flow, and she tries to restart the conversation by physically arranging Th.’s chair, in order to maintain the involvement of Th in the conversation. In T7 she introduces a meta-reflection on the ongoing conversation attempting to make Th reproduce the new sign that started it all (see above). Instead of doing so, he introduces a series of signs referring to different aspects of his experience.

T7	M:	(arranges Th.’s chair)	
	M:	FTT YOU TALKING (.) JUMP FTG	((Q1 + I4 new act))
T8	Th:	WATER-PLAYING(x4) FTG	((A1 = I5 action of subject??))
T9	M:	FTR	((turn not taken – returned))
T10	Th:	WATER-PLAYING >HOLE< FTG	((RI5: action, RI2: subject))
T11	M:	FTR	((turn not taken – returned))
T12	Th:	WA[TER-PLAYING(x5)	((RI5))
T13	M:	[WATER-PLAYING+co-active(x3) FTG	((C5 marked by active turn-giving))
T14	Th:	WASHING-SMOOTH	((I6 predicate to subj. in I2; marked))
T15	M:	WASHING-SMOOTH	((as-if C6))
T16	Th:	[WASHING-SMOOTH]	((MI6 {I6,C6}))
T17	M:	[WASHING-SMOOTH] WASHING-SMOOTH	((marked; as-if MC6 {I6,C6}))
T18	Th:	WATER-PLAYING(x4)	((MI5 {I5,C5}))
T19	M:	WATER-PLAYING	((as-if MC5 {I5,C5}))
T20	Th:	FTT BATHING(x3)	((MI1 {I1,C1}))
T21	M:	BATHING(x2)	((as-if MC1 {I1,C1}))

If we look upon the whole sequence T1 trough T21, and interpret it as an attempt to generate one coherent mental space, we get the following utterance:

“BATHING, HOLE-THING BATHING, WATER-PLAYING, WATER-PLAYING
HOLE-THING, WATER-PLAYING WASHING-SMOOTH WATER-PLAYING
BATHING”

In a sequential analysis the signs will show to be structurally tied together in a collaboration of building up a mental space. Every unit is a possible complement in the syntactic structure of this mental space. When taken together a sequence of signs will reveal the meaning of the singular signs by stabilising the contingency of their semantics from the source of semantic potential, and thereby securing the coherence of the utterance. This enriches the understanding of the sign sequence by giving it syntactic structure:

“BATHING(frame), HOLE-THING(subject) BATHING(locative), WATER-
PLAYING(act), WATER-PLAYING(act) HOLE-THING(subject), WATER-
PLAYING(act) WASHING-SMOOTH(subject predicate) WATER-PLAYING(act)
BATHING(frame)”

This could roughly be translated into:

“when in a BATHING scenario, the HOLE-THING was in the BATHING scenario, it was WATER-PLAYING (making the water move), the HOLE-THING was WATER-PLAYING, and it was/felt WASHING-SMOOTH in the BATHING scenario”.

If we consider the original tags of the sign in this sequence, it becomes clear that the syntactic structure would be hard to come by, if they were the only access to the semantics of the signs. The sequence ‘BATHE (BADE), HOLE (HULL) BATHE, WATER (VANN), WATER HOLE, WATER WASH (VASKE) WATER BATHE’ needs a lot more modifications in order to form a coherent mental space. It is of course clear that the thematic has to do with water, but the word classes are wrong. To conceptualise ‘WATER’ as an act or ‘WASH’ as an adjective would hardly be the first choices.

6.2.3. The hole in the head

We have seen that M fails to understand – or even notice – Th’s attempts to introduce the HOLE as a reference to the dolphin. Bearing this in mind we can return to the problematic combination of HOLE and pointing-to-the-head-of-M. First we will have to understand the pointing gesture as a proto-sign. The transcription is then as follows:

Transcription:

HOLE [...] LIKE-THIS-PLACE+head-of-M

As we saw above, M understands the sign LIKE-THIS-PLACE in a different manner. She understands it as a meta-comment on the conversation, and replies orally and by signs “shall I think well [...] inside the head?” She interprets the pointing gesture as INNER-STATE^SAME-PLACE+imperative, which is a highly abstract utterance compared to the ongoing negotiation of determining what the contents of the present mental space of Th are. It is much more likely that he continues to elaborate on the mental imagery, in order to make M create the same mental space.

When the combination is understood as a syntactical one, the gestural “placing” of the hole “on” M’s head is interpretable as the preposition *in* (or *on*):

Translation attempts:

(e) *Hole (in) a-head-like-this-head*

(f) “(The dolphin) had a hole in its head”

While standing in the water with the dolphins Th was very occupied by touching their breathing-holes⁶⁷. My suggestion is that by this utterance, he tries to explain that reference of the HOLE⁶⁸. This first attempt fails, and he continues in other (just as unsuccessful) ways. If we interpret the rest of the sequence along this line, even the apparently nonsensical utterances towards the end of the sequence make sense:

⁶⁷ C.f. the video sequence I(ii)a.

⁶⁸ This analysis is based solely on what is visible on the video. When presenting this analysis at a meeting in Skådalen I was informed by M that she actually has a deep scar from a cranial fracture at the exact place on her head that Th is trying to direct her attention to. This information makes the utterance even more simple: Th says ‘HOLE LIKE-THIS-SENSATION^PLACE+scar-from-fracture’ meaning “a hole like this hole”.

Transcription:

COME-AND-FEEL-THIS(pulls M's hand towards the radiator) LIKE-THIS-
PLACE+head 'LIKE-THIS-SENSATION^LIKE-THIS-PLACE+radiator'
(=unsuccessful proto-sign))

If we interpret this utterance as yet an (unsuccessful) attempt to inform M of his experience with the dolphin, the analogy is to be found in the comparison between LIKE-THIS-PLACE+head and LIKE-THIS-PLACE+radiator. If we accept the translation in (f), the reference to the head must be a reference to the hole in the head of the dolphin. Th knows from previous interaction with the radiator, that you can feel the hot air coming out of the holes in the top of the radiator. If Th had succeeded in getting M to feel the hot air coming out of the radiator, we could have transcribed the proto-sign like this: LIKE-THIS-SENSATION((hot air coming out of holes)). The analogy between the two holes are striking, and I dare the following translation:

- (g) *Come-and-feel dolphin-hole as radiator-hole*
- (h) *Come-and-feel! Dolphin-hole is like hot-air-hole*
- (i) "Come, let me tell you this: Hot air comes out of (the hole in) the head (of the dolphin)".

When we add Th's use of the sign DOG as a predicate to the hole-thing, these examples makes it clear that what Th is trying to do throughout the conversation is to refer to the dolphin as *the dog-like washing-smooth hole-thing*. I allow myself the liberty to translate that into *the washing-smooth hole-fish* in the name of aesthetics. The sensation of touching the smooth skin and the breathing-hole seems to be the most salient feature of his experience with the dolphin.

6.3. Outro: In this chapter I have

shown how a sequence of signs might be interpreted as an attempt to build up a syntactic structure. In other words, Th is guiding the space building of MA gradually introducing the components of the mental space he wants her to build. Additionally I

have suggested an interpretation of the many repetitions as fitting into a structured attempt to make her confirm her understanding.

I have likewise shown how the “right” knowledge of the core semantics of the signs is a prerequisite for understanding the utterances as coherent syntactic structures.

To validate this interpretation of the sign sequences as syntactic utterances it is of course necessary to undertake further investigations in a far larger corpus of video recorded and transcribed conversations.

One field of investigation that would be of great importance for understanding how these syntactic structures are configured is the field of grammatical markers of the different functions of the signs. So far the interrelations between the signs have been inferred from knowledge of the related experience. Without such knowledge one will have to rely on the asymmetry of the intuitive interpretation. Better understanding of cdb children’s understanding of grammar is the way around this trap. The next chapter is a first attempt to examine this understanding. We will see how a cdb child suggests a grammatical marker of past tense.

7. THE LOWER-LIP-DELICIOUS GRABBING-SIZE-SNACK

In this chapter I will analyse a sequence from a routine situation. I will focus on the pragmatic level of the utterance⁶⁹. This means that I will not address the questions on the level of enunciation or discourse, but take as a premise that the situation is as follows: The cdb child⁷⁰, Robin (Ro), and her adult caretaker, Caroline (Ca), are sitting at the kitchen table, and the ongoing discourse is, in short, one of ‘what Ro wants’⁷¹.

I will concentrate the analysis around two utterances made by Ro. Both are intended to inform Ca of what Ro wants.

Ro is cognitively very capable. She combines rows of signs in single utterances with syntactic structure. I will not address this capability in this thesis. The analysis of the (on-the-way-to-be-conventionalised) syntax of Ro’s (or other cdb children’s) signing is a huge work to be done. This thesis is primarily focused on the stages of (cdb) language (according to my definition in the introduction) before it is cultivated (if ever) into a consistent Saussurian *language*⁷². And these steps are legio - I have only addressed a few. Instead I will show how Ro tries to make up “something like grammar” by using a familiar sign, DONE, in order to make her grown-up partner, Ca, perform a shift in semantic domain from the here-and-now to the mental domain of *past tense*. By doing this, Ro shows additionally her capacity to choose among negotiation strategies of varied (grammatical) complexity when negotiating the meaning of her utterances. The first attempt is unsuccessful, the second succeeds.

7.1. Two strategies of negotiating semantics in ‘Robin and the petit gervais’⁷³

The goal of this analysis is to spell out the strategies adapted by Ro when she attempts to direct the attention of Ca to a specific shared experience. This will show how *shared experiences* are accessible as potential semantic meaning, and how the dynamics of specific strategies of reference to this *semantic potential* generate the negotiation and

⁶⁹ Video sequence I(iii).

⁷⁰ Robin is congenitally blind and profoundly deaf. (Source: Anne Nafstad dixit)

⁷¹ This premise is based on the introduction in the video where the situation is presented like this.

⁷² Saussure’s definition of *language*: “a self-contained whole and a principle of classification [...] something acquired and conventional” (1916 p.9f).

ritualisation of signs for use in creating language. These cognitive dynamics will be shown to be explicable in terms of mental space theory and blending and the theory of semantic domains⁷⁴.

7.2. First (unsuccessful) utterance

Before the first utterance (T1+)⁷⁵, Ca asked Ro if she wanted something to drink⁷⁶. This was rejected. Now (line 21) Ro takes the initiative to contact Ca, and uses the two following signs (line 22): (a) halfway completed 'DONE' and (b) the sign *DRINKING◊EATING* that Ca interprets (wrongly) as the sign DRINKING. The utterance is only partially understood by Ca. Before I analyse the utterance as a whole, I will address the semantics of the two signs (a) and (b). Let me begin with the least complex of the two.

(b) is understood by Ca as a reference to what Ro wants in response to the refused offering of water. This is fully coherent with the ongoing discourse. Furthermore Ca understands that Ro wants something to ingest. The sign (b) is interpreted as being in line with other already negotiated signs for eating and drinking, expressed through a motion by the hand towards the mouth. These bodily signs are negotiated from the metonymy: SAME-MOVEMENT IS (part of) same act⁷⁷. The schematics of this sign are thus relatively clear. What is not understood is the specific intended reference of this new sign *DRINKING◊EATING*, just as the object (derived from unfolding the metonymy) of the act remains obscure.

(a) is a bit more complex in its semantic structure. The already negotiated meaning of this sign is DONE⁷⁸. The normal use of this sign is "I am done with this!", "are you done?" or the like. Both of the uses mentioned require some preceding act, given by the situational context. To say DONE is an act of ascribing the terminative aspect to the preceding act in a sequence of acts. It is a part of the semantics of DONE, that it prompts for such a preceding act, without which it will not make sense.

⁷³ I presented a short version of this chapter at a Mini-Seminar on Semiotic Analysis at NUD, Dronninglund, Denmark May 1. and 2. 2003.

⁷⁴ The theory of semantic domains is only used here to distinguish between the here-and-now and the mental domain of remembered experiences, therefore no introduction will be made. The reader might consult Brandt (2000) for an introduction to this theory.

⁷⁵ Line 21-23 in the transcript.

⁷⁶ Line 10-17 in the transcript.

⁷⁷ See the chapter on *Proto-signs*.

The semantic meaning of DONE feeds into the syntax of the utterance and combines with the obscure *DRINKING◊EATING*. This sign (b) fails to fulfil the requirements of DONE, as it is not possible to interpret *DRINKING◊EATING* as a preceding act. In fact, there is no relevant preceding act in the situation. But DONE prompts for such an act. If we suppose that Ro is trying to make sense, the intention of this combination of signs must be sought elsewhere in their semantic potential. My suggestion is that Ro tries to guide Ca to perform a shift in mental domain from the here-and-now situation to the memory of shared experiences. She uses the sign (a) to perform the specific aspectualisation of past tense. In this way she suggests (a) as a closed class marker of past tense. The meaning of the utterance is then “the eating/drinking I did before”.

In order for us to understand how sign (a) can be schematised into the closed class meaning of a past tense marker, the different cognitive schematics of time types must be taken into consideration. As shown in fig. 7.1, the schematics of sequential time and aspectual time are blended in order to understand the normal use of DONE as a speech act of predication. In normal usage the speech act is stating the (here-and-now) termination of an act. But in this situation this use would not make sense. What is required for the utterance to make sense is a domain shift to the memory of shared experiences. We must accept that DONE is referring to an act of the past, seen from the present; the act is not merely done, it is “done before”. This is made possible by the terminative aspect already present in the speech act. Still being anchored in the present, the aspect is forced by the lack of a relevant preceding act to search its target act in another domain. Jumping backwards, the terminative aspect is projected into the past. Still the act, referred to in the utterance (sign (b)), is too obscure for Ca to understand that (a) is suggested as a past tense marker. She even fails to recognise the specific shared experience referred to by (b).

Fig. 7.2 gives a schematisation of the above analysis of the utterance, and how it interrelates with the negotiation of the signs. An account of the intended (but not understood) meaning is given in the last blend of the network. The argument for this is found in the further specification of the utterance, that Ro performs later on in the conversation.

⁷⁸ - or “finished”. the Danish word used in the video is “færdig”.

Fig. 7.1

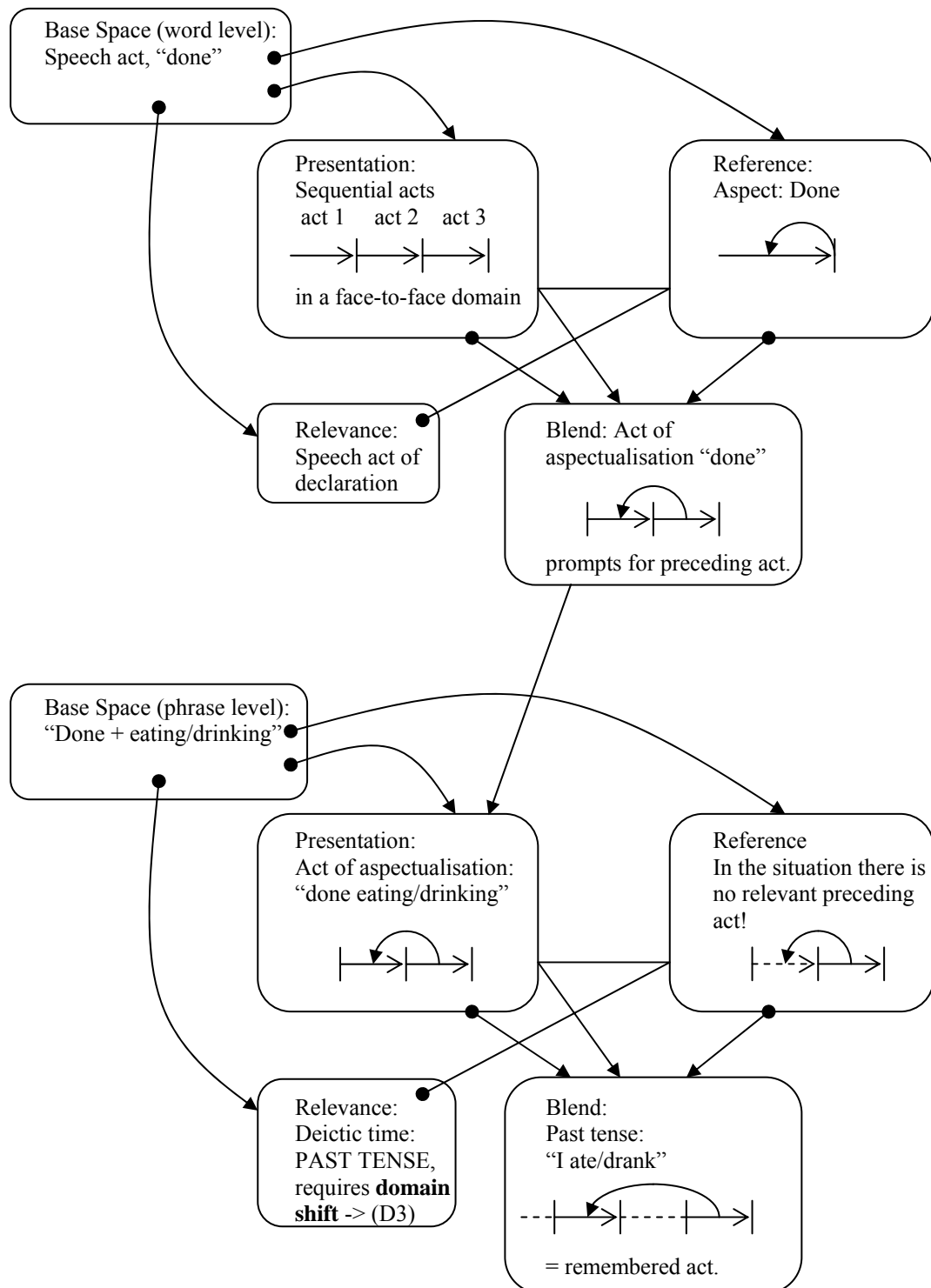


Fig. 7.2

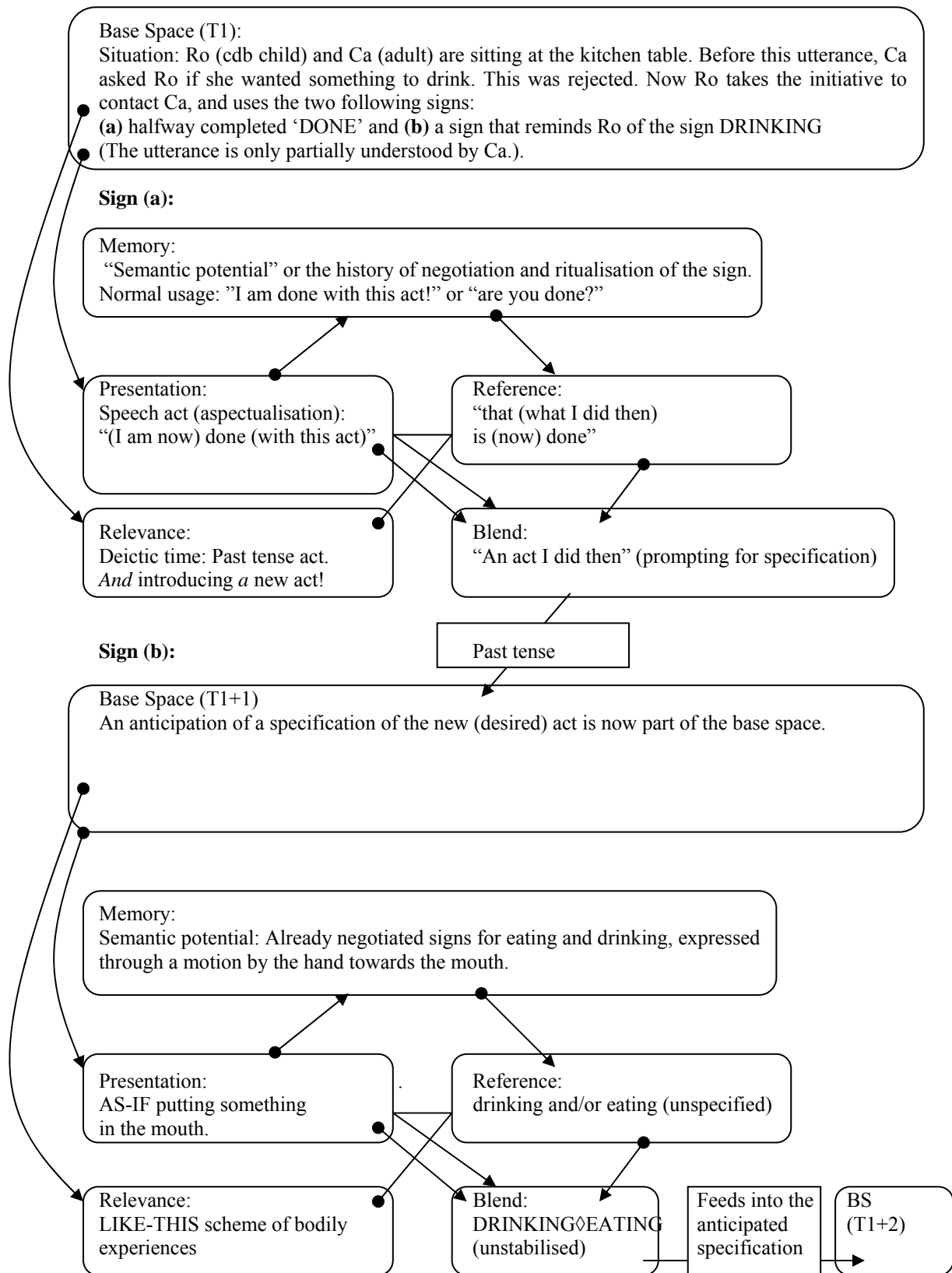
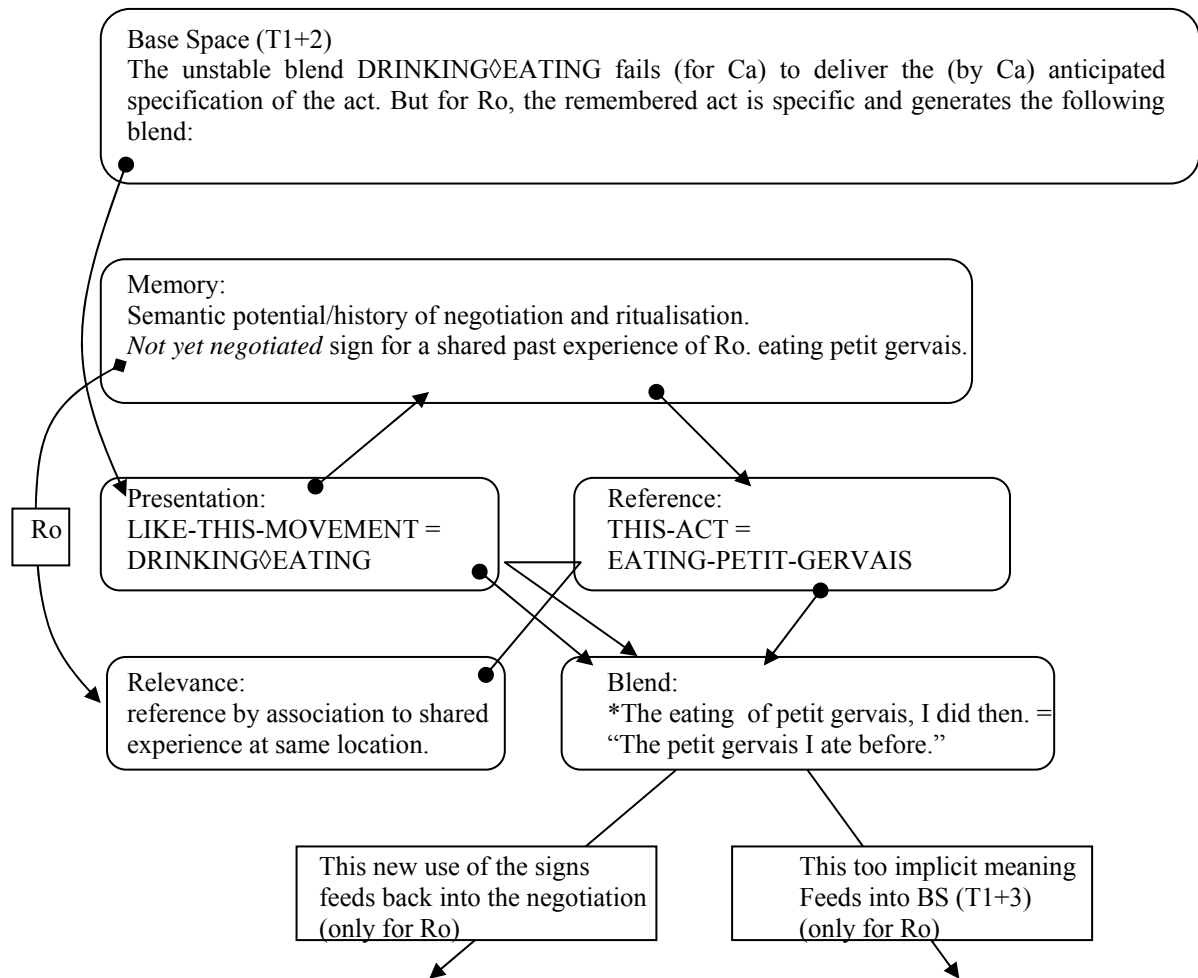


Fig. 7.3



As mentioned above, Ca fails to understand this all too implicit meaning, and offers (again) Ro something to drink, which she refuses (again). But for Ro the remembered act is specific and generates the blend in Fig. 7.3 I have represented the asymmetric knowledge about the relevance space by an arrow marked with Ro (for Robin) not from the actual base space, but from the box representing the negotiated semantic potential. This indicates that the relevance of the blend stems from Ro’s experience of negotiated meaning. This meaning is not recognised by Ca, thus the asymmetry. The argument is that shared experiences are only *potential* meaning generators. These shared experiences can be referred to in a too implicit manner for a transfer of semiosis to succeed (as in T1+), or they can be explicit *enough*. A successful account of this transfer of semiosis is seen in the following sequence, in which Ro elaborates on the semantics of her utterance.

7.3. Second (successful) utterance

After an intersection of misunderstandings between Ro and Ca, Ro rephrases the utterance. Now (in (BS T2+) line 30-37) she uses three signs (line 33-35): (a) DONE, (b) *DRINKING◊EATING* and (c) she reaches out towards a specific place on the table in a pointing-and-grabbing gesture. Then Ca understands that Ro wants the petit gervais.

At first (BS T1+) Ro attempted to be understood with the only support being an implicit reference to SAME-SITUATION (by the kitchen table as before) (implicit and therefore not occurring in the transcript). This was not enough for Ca to understand the utterance. Then in BS T2+ Ro introduces the counterfactual AS-IF-gesture: reaching-out-and-grabbing-something. Only then Ca performs the shift in mental domain, even though she probably does not understand the proposed past tense marker. The understanding is induced by further *specification of the locus* of the shared experience in mind by the sign SAME-PLACE (here on the table), and by an *elaboration on the act* of the shared experience by means of SAME-MOVEMENT (grabbing-something-here)⁷⁹. The counterfactual pointing-and-grabbing gesture supports the domain shift from the *actual face to face* situation to the *mental* domain of remembered shared experiences understood as past tense acts. Furthermore, in BS T2 Ro introduced a more *explicit reference to the object* of the remembered act by the sign: SAME-MOVEMENT+size(=grabbing)). Ro does this by reaching out and pointing towards something, which is not there, and at the same time moving as if she was grabbing this non-existing object. This new sign, configured by the counterfactual AS-IF-pointing-grabbing, has at least three effects on the meaning of the utterance: Through the reference to shared experiences: (1) It enhances the counterfactuality of the reference, and thus helps Ca to do the domain shift. (2) It puts forth a specific movement that Ca is supposed to associate with the specific act of Ro eating the petit gervais. (3) It introduces a specific reference to the object of this act. Ro doesn't want some unspecified drink, she wants the specific object that is missing at this specific spot on the table. In short, the AS-IF-pointing-and-grabbing gesture

- (1) enhances counterfactuality – AS-IF,

- (2) elaborates the act – SAME-MOVEMENT, SAME-PLACE,
- (3) introduces a specific object by elaborating the act: SAME-PLACE+table^SAME-MOVEMENT+size.

This balances the symmetry of the negotiation. Ca now recognises what “same act as before” in “same situation” Ro is referring to. Ca remembers the shared experience, and the sign EATING-PETIT-GERVAIS is introduced as being different from EATING and DRINKING.

7.4. Applied strategies of mental space delegation in negotiation of intended meaning.

In terms of strategies of mental space delegation/building/elaboration, Ro takes two different approaches to guide the space building of Ca.

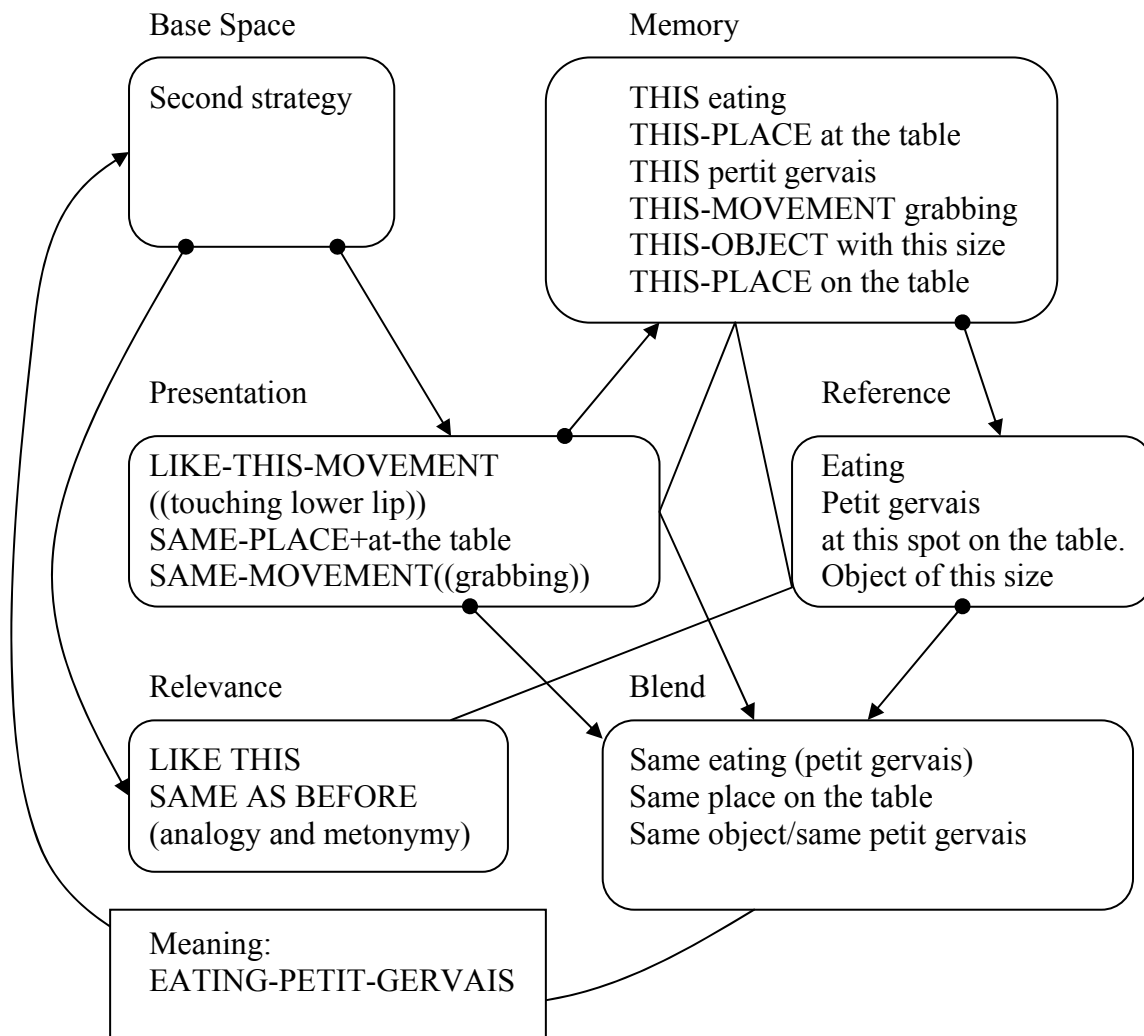
The first is a highly schematic use of a negotiated sign (DONE) as a marker of deictic past tense. This is a high level cognitive operation that demonstrates Ro’s highly developed schematic understanding of communicating with symbolic semantics regarding temporal modes and aspects. This is most likely not a fully consciously calculated construal. Rather, it is an associative blend made possible by the developed cognitive apparatus of Ro. This first strategy is what I proposed as “suggesting DONE as a closed class marker of past tense”. This is the most rational way of expressing what she wants, which could be translated into “I want what I had before”. The fact that Ca does not understand the past tense is what makes her fail to understand the utterance as a whole, and thus the information of what Ro wants is lost. “I want what I had before” is actually a quite precise statement if and only if DONE is understood in this way. When DONE is ignored the statement of Ro is a mere “I want this”. Hence the reference of ‘this’ is not available in the context, and the statement does not make sense.

The second strategy applied is expressed in the successful elaboration on the main contents of the mental space shared. Both Ro and Ca are engaged in determining what Ro wants in the given scenario. Ro elaborates on this ‘what’ of the frame already suggested by Ca. This frame consists of two main components, namely ‘sitting at the kitchen table’ and ‘Ro ingesting something’. Ro elaborates on and specifies both of

⁷⁹ For an elaborate account of these proto-signs see the chapter **5. The Proto-sign**.

these components, as she introduces the pointing-and-grabbing gesture. In order to make Ca remember the shared experience at the kitchen table ‘Ro eating petit gervais’, Ca now chooses to give more details of the specific object missing in the present frame. By this strategy Ro tells Ca, that what is missing now was here on this specific spot earlier, and it had this specific size. By making these specifications, the mappings between the two situations are much stronger, and Ca performs the blend “What I want is what I had”. The blend makes Ca able to understand that the missing object is the lower-lip-delicious grabbing-size-snack ‘petit gervais’.

Fig. 7.4. Second strategy



7.5. Outro : In this chapter I have

shown how Ro applies negotiation strategies of decreasing complexity in the conversation in order to be understood by Ro. As an interpretation of her first strategy, I have suggested a bold interpretation of the peculiar use of the conventionalised sign DONE, daring the statement that Ro tries to create her own grammatical marker of past tense. The second strategy that she applies is a retreat to the use of proto-signs. This might suggest that the use of proto-signs is a fundamental trust of potential meaning. But as the first strategy suggests, it is not the only source of potential meaning. As soon as a more complex language is developed, as in Ro's case, more symbolic and schematic meaning constructions will be suggested by the cdb child in order to rationalise mental space delegation. This (perhaps exaggerated) interpretation of her grammatical skills could be confirmed or dismissed by an attempt to intervene in the conversations with Ro in such a manner that encourages the creation of such grammatical markers. How this should be done is a challenge to her future partners and their supervisors.

8. SUMMARISING DEEDS AND THOUGHTS

In this thesis, I have used the word ‘preliminary’ a lot. Yet, now that it is almost written to the end, it seems to me that I should have used the word a lot more. This thesis is surely only a preliminary attempt to sketch out “some prospects for future integration of the research on deafblind communication and the analytic approach provided by cognitive semiotics”. The point of writing “some prospects” and not “the prospects” is that every single one of the chapters in this thesis are all but superficial scratches in the surface of huge complexes of problems that might be taken up in future more thorough research.

But still, let me summarise the findings and suggestions of this thesis. First of all, let me conclude that the world of cdb children is NOT a dark and silent abyss. This should be clear from the complexity of the conversations that I have analysed in this thesis. Secondly, the tools of the 6-spacer and the CA-methods have proven to be useful tools for examining how we might understand that world. I might modify the metaphor above by adding that the work done in this thesis might only be superficial scratches, but it has never the less revealed what huge material lies beneath the surface, and that the tools I have chosen for scratching this material have proven efficient.

In chapter 4, we saw how signs may be negotiated from spontaneous gestures. The negotiation was shown to be based on a gradual transformation of the expression of a here-and-now experience of a nursery rhyme into a more detached referential modus. From being a mere THIS-ness the referred undergoes a transformation into a distinct constant SAME-ness, and then into a metonymic icon/index capable of referring to the whole.

In chapter 5, this transformation of the reference mode and the phenomenology of perception were shown to be the ground stones of the negotiation of signs in the making. I suggested a phenomenology of the proto-sign consisting of the three reference modes THIS-ness, SAME-ness, and LIKE-THIS-ness, and of the four perception topoi INNER-STATE, MOVEMENT, SENSATION, and PLACE.

Chapter 6 showed how the origin as proto-sign has to be taken into consideration when deciding on what core meaning is to be ascribed to the single sign. Based on this,

I suggested that a format for a dictionary of negotiated signs should as a minimum contain the aspects of origin and normal use, and that the core meaning is to be derived from these two.

This understanding of the semantics of the negotiated signs was shown to be a prerequisite for understanding the syntactic structure of the utterances. We saw how the tags that we intuitively use as translations are likely to obstruct the “right” understanding of the signs in the syntactic context.

In chapter 7, I showed an example of how grammatical markers (that could support the understanding of these syntactic relations) may be negotiated from already known signs. I suggested that an unusual use of the sign DONE could be interpreted as an attempt to create such a grammatical marker of past tense.

8.1. Suggestions for future research

In the course of working out the material for the thesis a lot of loose ends have been set aside. Especially the very recent access to better video editing equipment during a visit to Skådalen Resource Center (july 2003) has accelerated the complexity and precision of the empirical basis for the transcriptions – and thereby the analyses. In the light of these much more precise transcriptions, many (if not all) of the analyses in this thesis ought to be revised. Only the analysis in the chapter **Th and the dolphin** has profited a bit from the frame-by-frame graphic notation Nafstad and I sketched out during my stay there (c.f. appendix III). I have chosen *not* to re-write the entire thesis integrating this new more precise notation system, but to leave it as “work to be done”. As I hope it is clear from the Turn-Taking analysis in the chapter mentioned above, the micro-analyses made possible by a notation system of this kind reveals a lot of interesting aspects of cdb communication that would benefit from a thorough semiotic analysis and modelling. A few of them being:

- What are the structural restraints on the way cdb children develop syntax?
- What are the structural restraints on the way cdb children develop grammar?
- What are the shared features of proto-signs and conventional signs that might help the adult partners when trying to teach cdb children conventional signs?
- What are the constants and variables in the problem of keeping dialogical attention (e.g. hand-positions)?

- What are the constants and variables in the problem of recognising turn-taking structure in the tactile modus?
- etc.

Investigation into these and many other aspects of cdb communication from a cognitive semiotic tradition would contribute to the field of cdb research as well as to the field of cognitive semiotics and linguistics.

8.2. Final outro: The problem of the generic sign: THIS-KIND

Let me end this thesis by returning to the problem of the reference mode THIS-KIND, as I promised in note 47 when explaining the reference mode LIKE-THIS. This short essayistic speculation is meant as an attempt to present a main implication of this thesis on semiotic and linguistic theory, but it is close to deconstructing the entire argumentative structure of the thesis.

In one of her many comments on this thesis Nafstad posed the question “Isn’t LIKE-THIS-ness the same as kind/basic category?” I have thought about this a lot. I think that the instance you use a sign referring to THIS-KIND, you will have created a “real” lexical word (with the core meaning being ‘head’, ‘table’, ‘to run’, ‘to wash’, or the like). As long as it is characterised by analogue features (LIKE-THIS-ness), the sign itself is not a basic category sign. It might refer to what we understand as the basic category of ‘head’ or ‘table’ by pointing to this-analogue-kind-of-thing, but the meaning only becomes THIS-KIND when you have a stabilised negotiated SIGN.

Maybe THIS-KIND is another reference mode. If we understand for example WATER-PLAYING as explicable by the proto-sign THIS-KIND-OF-SENSATION^MOVEMENT^INNER-STATE we might be able to explain how a proto-sign becomes a SIGN. WASHING-SMOOTH would be THIS-KIND-OF-SENSATION^MOVEMENT^PLACE. Then the total typology of reference modi would be THIS, SAME, LIKE-THIS and THIS-KIND. Maybe even SAME-KIND and LIKE-THIS-KIND. Then THIS-KIND might be the basic category (a generic hammer), LIKE-THIS-KIND a sub-category (used to compare two different types of hammers) and the SAME-KIND would be referring to category itself (“this is a ‘hammer’”). But I think we are way beyond proto-signs here and into “real” lexical words.

If I incorporate this THIS-KIND-ness to the system, it makes it very clear that these reference modes are analytic products and not visible features of the sign. We knew that all along, but now it gets trickier to argue whether a sign is to be understood as LIKE-THIS-PLACE, or as THIS-KIND-OF-PLACE. Just consider the example from Thomas – the pointing to Marit’s head. Is he saying “hole a place LIKE-THIS place (your head)“, or “a hole placed THIS-KIND of place (on a head)”? It is very difficult to differentiate between the two, and doing so will be highly influenced by analyst’s trust in Th’s level of understanding the world in symbolic terms. If what he says is actually (as we think now c.f. note 68) ‘HOLE LIKE-THIS-SENSATION^PLACE+scar-from-fracture’ meaning “a hole like this hole” and thus trying to use her hole as a pure analogy, the two first options are of course overruled altogether.

This problem of generic ‘heads’ and other basic categories poses another question: Could not the proto-sign be seen from the other side of cognition – from the understanding of the environment? Then we would have to add a *World Topology* to the system in order to account for the shift from cognitive processing to symbolic representation. These environmental topologies could be: SURFACE, SUBSTANCE, OBJECT, SITUATION, INTERACTION-MODE, etc. WASHING-SMOOTH would then belong to the category THIS-KIND-OF-SURFACE and would connote implicit knowledge of this kind of surface regarding the SUBSTANCE it is emerged in, the PLACE it is usually found, and the SITUATION in which it is usually experienced.

The development from proto-sign to symbolic representation might be characterised as a shift from *perception oriented* reference mode to *environment oriented* reference mode, and from *feature oriented* topology to *gestalt oriented* topology. That would be a nice conclusion to make. I just wonder if it was not like that all along, and if perhaps the whole notion of the sign based on bodily experiences is wrong? It looks as if the cdb children develop signs by using the proto-signs in the way I have suggested in the thesis, but isn’t it just until they obtain “real” language and can express how they “really” experience the world (i.e. as an environment inhabited by gestalts)?

This is where my argumentation throughout the thesis is facing deconstruction. But let me rephrase the questions. What if it is our notion of “real” language that is wrong? What if the semantics of natural languages are in fact based on the same

principles as I have suggested for describing the tacitly signed languages of cdb children? These principles being: Development of *core semantics* through *negotiated signs* for *bodily experiences* of the world in a quest for *intersubjective attunement of mental spaces*.

Maybe it would be interesting to reverse the assumption I made in the introduction and look at natural language AS IF it was developed from proto-signs. We could compare what changes the reference mode undertakes when the proto-sign LIKE-THIS-SENSATION (that means something like sliding-palms-on-something-fourth-and-back-under-water-giving-a-smooth-sensation) is negotiated into WASHING-SMOOTH to what happens to the reference modes in natural languages when perception based descriptions are fixed into lexical expressions like ‘a homerun’? Could it be schematised into PLACE^MOVEMENT + DIRECTION = THIS-KIND-OF-MOVEMENT^TOWARDS^THIS-KIND-OF-PLACE? The signs are concatenated because it is a compound and not a sentence, but what is the difference between the core meaning of the compound-word ‘a homerun’ and that of the nominal syntagm ‘a run to the home base’? What about “real” basic category nouns like ‘mother’, ‘rock’, or ‘cat’? Are their origins as proto-signs just too far gone in the evolution of language for us to recognise them, or are they actually emerged in other ways?

These questions are of course the result of wild speculations, but the problem of reference modes as described here and in the rest of the thesis is in my opinion very relevant for cognitive linguistics and cognitive semiotics – it poses anew the questions “what is semantics?” and “what is language?” And even more radically: “What is semiosis?”

RESUMÉ PÅ DANSK

DEN VASKEGLATTE HULFISK og andre opdagelser af semantisk potentiale og forhandlingsstrategier i konversation med døvblindfødte børn

1. Introduktion

Dette kandidatspeciale er skrevet som en direkte respons på et udtrykt ønske fra Deafblind Internationals Europæiske Arbejdsgruppe om Kommunikation om, at forskere indenfor lingvistik og kognitiv semiotik monne bidrage til en udvidet forståelse af de kommunikative og sproglige processer, der ligger til grund for døvblindfødte (cdb) børns sprogtilegnelse. Denne arbejdsgruppe (her først og fremmest repræsenteret af Anne Nafstad) har gennem de sidste 15-20 år opnået forbløffende resultater med: (1) emotionel tilknytning mellem cdb børn og voksne omsorgspersoner; (2) kompetence til genetablering af face-to-face-relationer gennem samreguleret samspilserfaring og samregulering af nærhed og afstand; og (3) udvikling af potentielt kommunikative udtryk.

Arbejdsgruppens igangværende projekt fortsætter forskningen i, hvordan spontane gestus forhandles til kommunikative tegn. I denne forbindelse efterspørges *en teoretisk baseret redefinerings af døvblindfødtes "Ord" og "Verden"* – en efterspørgsel, som dette speciale er et foreløbigt forsøg på at efterkomme. Dette gøres gennem mikro-analyse af tre videosekvenser med konversationer mellem cdb børn og voksne omsorgspersoner. Disse videosekvenser (appendix I) foreslås set og sammenholdt med mine transkriptioner af disse (appendix II), før dette speciales kapitel 4-8 læses.

2. Noget ligesom sprog

To forskellige analytiske paradigmer tages i brug i forsøget på at beskrive cdb børns taktile kommunikation *som om det er sprog*: (1) Mental space og blending teorierne tages i anvendelse til analyse af tegnenes semantiske strukturer, idet Per Aage Brandts 5-spacer udvides med et særskilt space for *hukommelsen* til en 6-spacer. (2) Etnografisk metodologisk konversationsanalyse (CA) tages i anvendelse som redskab til at analysere de forhandlingsprocesser, der stabiliserer betydningen af de anvendte tegn i konversationerne.

3. Angående transkription: at få det til at ligne sprog

I arbejdet med mikro-analyserne udvikles et forslag til et transkriptionssystem, der tager højde for de semiotiske aspekter af disse betydningsforhandlinger. Dette transkriptionssystem præsenteres her *før* analyserne af didaktiske grunde, men er i høj grad udarbejdet som et produkt af arbejdet med disse analyser.

4. Hvordan man skaber et tegn

Den første videobaserede analyse viser, hvordan en spontan gestus gradvist forhandles frem til at have en reel referentiel funktion i forhold til et børnerim, som den voksne (Mo) ”synger” for barnet (La). Med udgangspunkt i et spontant *tænketegn* (thinking-sign) fra La lykkes det Mo ved hjælp af *sam-referentielle* (co-referential) tegn at udvikle tegnets referencemodus fra en simpel *THIS-ness* (”dette-hed” eller singularitet) til en distinkt konstant *SAME-ness* (”samme-hed” eller konstans) og videre til et metonymisk ikon/index, der kan referere til børnerimet som helhed.

5. Prototegnet

De strategier, der ligger til grund for disse betydningsforhandlinger, danner basis for en typologi over de *prototegn*, der anvendes i betydningsforhandlingen – tegn, der endnu ikke har en færdig-forhandlet semantik. Jeg foreslår, at disse prototegns fænomenologi udgøres af *tre referencemodi* THIS-ness, SAME-ness og LIKE-THIS-ness (”ligesom-dette-hed” eller analogi) og *fire perceptuelle topoi* INNER-STATE (indre tilstand), MOVEMENT (bevægelse), SENSATION (sansning) og PLACE (sted). Således opstiller jeg en typologi på tolv prototegn ved at kombinere disse referencemodi og perceptuelle topoi.

6. Th og delfinen

I dette kapitel analyseres udvalgte delsekvenser af en lang konversation mellem et cdb barn (Th) og hans lærer (M) om en oplevelse Th havde haft 6 måneder tidligere, hvor han badede sammen med en delfin. Denne analyse viser, hvordan Ths kreative brug af de få tegn, som han kender og bruger, fordrer mere af M end blot en intuitiv forståelse af hans tegn. Et ordbogsformat baseret på tegnenes *forhandlingshistorie* foreslås. For at

afspejle det enkelte tegns oprindelse som prototegn foreslås ordbogen som et minimum at indeholde (1) tegnets *oprindelse* (origin), (2) *normale brug* (normal use) og (3) den deraf afledte *kerne-betydning* (core meaning). Denne kerne-betydning skal afspejle det faktum, at et tegn ofte kan bruges som udtryk for forskellige ordklasser e.g. både nominalt og verbalt. Gennem en analyse af den sekventielle opbygning af koherente mentale rum, vises denne forståelse for tegnenes kerne-betydning at være af afgørende betydning for, at forstå den syntaktiske struktur, der modsvarer det mentale rums koherens.

7. Den underlæbe-lækre gribelige godbid

Forståelsen af den syntaktiske struktur i foregående sekvens forudsætter en del kendskab til den oplevelse, som ytringerne referer til. En vigtig grund til dette er, at de grammatiske markører (hvis nogen), som cdb børn anvender endnu ikke er blevet undersøgt. Den sidste analyse i dette speciale åbner for en sådan undersøgelse ved at analysere de forhandlingsstrategier, som en yderst ”veltalende” cdb pige (Ro) tager i anvendelse for at få sin lærer (Ca) til at foretage et skift i semantisk domæne fra *her-og-nu* til *dengang*. Jeg viser, hvordan hun i første omgang forsøger den meget sofistikerede strategi at foreslå det kendte tegn for FÆRDIG (DONE) som datidsmarkør. Da dette slår fejl, anvender hun en mere primitiv strategi, og retirerer til brugen af prototegn, for at få Ca til at forstå, at hun ønsker det, som var lige der på bordet lige før, nemlig hytteost (petit gervais).

8. Sammenfatning og forslag til fremtidig forskning

Som det fremgår af kompleksiteten og mangfoldigheden af de ovennævnte problemstillinger, har de valgte værktøjer (6-spaceren og CA-metode) vist sig yderst anvendelige i forsøget på at redefinere døvblindfødtes ”Ord” og ”Verden”. Som det også fremgår, er dette arbejde kun lige begyndt. Jeg håber med dette speciale at have slået dørene op til en kognitiv semiotisk undersøgelse af døvblindfødtes taktile tegnsprog. Adskillige problemer kunne med fordel underkastes en grundigere analyse end det har været muligt her; lad mig blot nævne nogle få:

- Hvad er de strukturelle parametre for cdb børns tilegnelse af hhv. syntaks og grammatik?
- Hvilke lighedstræk mellem prototegn og konventionelle tegn kunne hjælpe de voksne omsorgspersoner i arbejdet med at lære cdb børn konventionelle tegn?
- Hvilke konstanser og variabler strukturerer problemet med at holde den dialogiske opmærksomhed (e.g. håndstillinger)?
- Hvilke konstanser og variabler er strukturerende for problemet med at genkende turn-taking-struktur i den taktile modus?
- Osv.

Endelig åbner studiet af cdb kommunikation også op for en fornyet stillingtagen til nogle centrale lingvistiske og semiotiske problemstillinger. Hvordan passer de foreslåede principper for cdb sprogilegnelse med "normal" sprogilegnelse? Hvad modsvarer et begreb som kerne-betydning i en "normal" semantik? Bliver de naturlige sprog også tilegnet gennem noget, der svarer til prototegn, og i givet fald hvad? Disse spørgsmål leder til at vi må stille nogle grundlæggende spørgsmål på ny: "Hvad er semantik?", "Hvad er sprog?" og endelig "Hvad er semiosis?"

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APPENDIX

I. The videocassette

The video cassette that accompanied the thesis contained the following sequences:

(i) Lasse and his mother

Source:

NUD (2000)

(ii) Th and the dolphin⁸⁰

(a) Th in the water with dolphins, his mother, a dolphin-therapist, and others.

(b) Th engaged in a conversation with Ma about the experience.

Source:

Research corpus of Anne Nafstad. These sequences are protected by Norwegian laws on science ethics and may only be used in the evaluation of this thesis.

(iii) Robin and the petit gervais

Source:

NUD (2000)

⁸⁰ This sequence is still protected by Norwegian ethical laws, and it may not be distributed or shown. I have a special permission to use it here provided that it will not be used in other contexts.

II. Transcriptions

(i) Transcription of “Lasse and his mother”

VIDEO II, sequence 1.

07.05.03 by Flemming Ask Larsen.

Participants: La: Lasse, cdb child; Mo: Lasse’s Mother; NN: person in background.

- 1 00.00.06 (cut-in in the middle of sign)
- 2 Mo ...??...THIS-SENSATION^PLACE+playing(circling finger in palm*L of La)/”...??...the
- 3 ted[dy bear”(singing)
- 4 La [(opens hand and stretches arm*L) / THIS-SENSATION+contemplative+conducting⁸¹ (*R arm
- 5 stretched out hand open)=
- 6 Mo THIS-SENSATION^PLACE+playing+build-up⁸²(squeezes La’s arm)/”one step”(singing)
- 7 THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm near elbow)/”two
- 8 [step”(singing)
- 9 La =[+smile =
- 10
- 11 Mo [THIS-SENSATION+playing+build-up(tickles La under arm*L)/”tickly under there”(singing)
- 12 (*→)
- 13 La =[THIS-INNER-STATE+giggle (pulls *L hand away from Mo, tight fists *L+*R).
- 14 00.00.18
- 15 La THIS-PLACE+conative(stretches hand*L out for more) (.) SAME-PLACE(on arm by
- 16 elbow)^LIKE-THIS-SENSATION(squeezes arm)
- 17 Mo THIS-PLACE+repetetly(index finger on La’s palm*L)/”er det de:n der?”
- 18 La THIS-PLACE+confirmative(opens hand and stretches arm*L)
- 19
- 20 Mo [THIS-SENSATION^PLACE+playing(circling finger in palm*L of La)/”round and round the
- 21 table like a teddy =
- 22 La [THIS-SENSATION+contemplative+conducting(*R arm stretched out hand open)=
- 23
- 24 Mo =[bear”(singing)=
- 25 La =[SAME-INNER-STATE+continually+contemplative(*R tight fist)=
- 26 Mo =THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm*L)/”one step”(singing)

⁸¹ ‘+conducting’ means in this case, that the child actively accompanies the “listening” with rhythmic imitation of the tactile sign, imposed on his left hand by the mother. This results in a “conducting” gesture by his right hand. (cf. Trevarthen).

⁸² ‘+build-up’ means, that the sign starts with a brief hesitation marking the place of the sign before the actual sign is performed. This enhances the rhythmical pattern of the song in the tactile version of it.

27 [THIS-SENSATION^PLACE+playing+build-up(squeezes La's arm near elbow)"/"two
28 step"(singing) (.)
29 La =[+smiling=
30 [THIS-SENSATION^PLACE+playing+build-up(!)(tickles under arm)"/"tickly under there"
31 (singing)
32 La =[THIS-INNER-STATE+giggle(kryber sammen)
33 (3)
34 La THIS-PLACE+conative(*L reaches out for Mo) = (2-3 sec.) = , SAME-SENSATION
35 +contemplative+continually(*L stretched away from Mo, *R conducting gesture - **L+R
36 fingers moving)=(8 sec.)=
37 Mo "hva' så?"
38 La >>(*→) (*L reaching out for Mo/open palm, *R open palm)<< LIKE-THIS-
39 PLACE^SENSATION(*R grabs arm *L by the elbow)
40 Mo LIKE-THIS-PLACE+repetetly(index finger on La's palm*L)"/"er det de:n der?"
41 La (*→) (*L reaches out for Mo fingers down, face up)
42 Mo "ja:ah!"
43 La (*L fingers up, *R conducting position)
44 Mo (→*) [THIS-SENSATION^PLACE+playing(circling finger in palm*L of La)"/"round and round
45 the table like a teddy bear"(singing)=
46 La [THIS-SENSATION+contemplative+conducting(*R arm stretched out hand open)^THIS-
47 INNER-STATE+smiling=
48
49 Mo =THIS-SENSATION^PLACE+playing+build-up(squeezes La's arm*L)"/"one step"(singing)
50 THIS-SENSATION^PLACE+playing+build-up(squeezes La's arm near elbow)"/"two
51 step"(singing) [THIS-SENSATION^PLACE+playing+build-up(!)(tickles under arm)"/"tickly
52 under there" (singing)
53 La =[THIS-INNER-STATE+giggle+contemplative(kryber sammen, **R+L tight fists)=(3 sec.)=
54 00.01.12
55 Mo "ja [den er go!"
56 La [(sits up, face towards Mo)
57 Mo SAME-PLACE+palm*L-of-La(pointing to hand of La*L)"den der"
58 La SAME-PLACE+palm*L(*R touches palm*L, smiling) THIS-PLACE+imperative(*L reaches
59 towards Mo)
60 Mo SAME-PLACE+palm*L-of-La"/"ja, den de:r! ja:ah de:e go:dt!" (→*) "heh h h mmh"
61
62 Mo [THIS-SENSATION^PLACE+playing(circling finger in palm*L of La)"/"round and round the
63 table=
64 La [THIS-SENSATION+contemplative+conducting(*R arm stretched out hand open)^THIS-
65 INNER-STATE+smiling(head upwards and from side to side)=

66

67 Mo =like a teddy [bear”(singing)=

68 La =[(face towards Mo, concentrated look, stops conducting)=

69 Mo =THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm*L)/”one step”(singing)

70 [THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm near elbow)/”two

71 step”(singing)=

72 La =[(starts to smile expectantly)=

73

74 Mo =[THIS-SENSATION^PLACE+playing+build-up(!)(tickles under arm)/”tickly under there”

75 (singing)

76 La =[THIS-INNER-STATE+giggle+contemplative(kryber sammen, **R+L tight fists) =(1.5 sec).=

77 LIKE-THIS-SENSATION^SAME-PLACE+contemplative+smiling(*R touches *L by the

78 elbow) =(2 sec).= (→*) (arms stretched forward, smiling) (.)

79 Mo “hva’ så?”

80 La (spreads out arms, stops smiling) (arms in the air)

81 00.01.46

82 NN (3.5 sec.) / (voice in background: “prøv og vent til han gør sådan her, [...] samtidigt med at han

83 gør det med hånden...”=

84 La [LIKE-THIS-SENSATION^SAME-PLACE(*R touches *L by the elbow)

85 NN =[“jAh!”]

86 Mo [“jAh!”]

87 Mo SAME-PLACE+palm*L-of-La+confirmative

88 [(→*) “ja det var godt!”=

89 La [THIS-SENSATION+contemplative+conducting(*R arm stretched out hand open)^THIS-

90 INNER-STATE+smiling=

91 Mo =THIS-SENSATION^PLACE+playing(circling finger in palm*L of La)/”round and round heh h

92 the [table like a teddy bear”(singing)=

93 La =[+laughing=

94 Mo =THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm*L)/”one step”((singing))

95 [THIS-SENSATION^PLACE+playing+build-up(squeezes La’s arm near elbow)/”two

96 step”(singing)

97 La =[(stops smiling)=

98 Mo [THIS-SENSATION^PLACE+playing+build-up(!)(tickles under arm)/”tickly under there”

99 ((singing))

100 La =[THIS-INNER-STATE+contemplative(kryber sammen, *R tight fist *L stretched out) =3.

101 sec.= , SAME-INNER-STATE+smiling+contemplative(head upwards and from side to side),

102 SAME-PLACE+elbow+contemplative+continually(head turned away)=

103 Mo SAME-PLACE+affirmative/”den der ja!”

104 La = SAME-PLACE+elbow+contemplative+continually(head down, arms pulled towards body, no
105 smile)
106 Mo “ska’ vi gør’ det igen?”(reaches out for La)
107 La (pulls hands away – hides *L in sleeve)
108 cut
109 00.02.20

(ii) Transcription of “Th and the dolphin”

(part of Nafstad’s data)

Transcriber: Flemming Ask Larsen, 2003.

Participants: **Th**: Thomas, deafblind child; **M**: Marit, adult teacher.

- 1 00.02.26
- 2 Th: BATHE
- 3 M: (→*) BATHE (*→)
- 4 Th: ((touches his own hand = the new sign for something like JUMP or HOLE: DOLPHIN?))
- 5 BATHE (*→)
- 6 M: BATHE/”yes and then?”
- 7 Th: (→*) BATHE
- 8 M: (arranges Th.’s chair)
- 9 M: (→*) YOU/”du” REMEMBER/”husker du” (.) WATER/”så’n?” (*→)
- 10 Th: WATER (*→) (.)
- 11 M: (←*)
- 12 Th: WATER
- 13 M: (*→) [”ja”]WATER/”vand” (*→)
- 14 Th: WASH (*→)
- 15 M: WASH / ”å så vaske” (*→)
- 16 Th: WASH (*→)
- 17 M: (→*) WASH / ”vaske”
- 18 Th: WATER
- 19 M: WATER / ”og vann”
- 20 Th: BATHE
- 21 M: BATHE / ”og bade”
- 22 Th: BATHE [FELT LIKE-THIS-HERE((touches thighs))
- 23 M: [”og så, hva er det nye tegnet?”
- 24 Th: FELT LIKE-THIS-HERE((touches thighs))
- 25 Th: [’BATHE’ ((only *R))
- 26 M: [(→*)
- 27 M: FELT-LIKE-THIS-HERE((touches thighs = TROUSERS??))/”bukser” LIKE-THIS-
- 28 HERE((touches chest = CLOTHES??))/ ”klær” FELT-LIKE-THIS-HERE((touches thighs =
- 29 TROUSERS??))/”bukser”
- 30 [((**withdraws** - hands in the air))/”kan du vise mig tegnet for delfinfisk?”
- 31 Th: [FELT-LIKE-THIS-HERE((touches thighs = TROUSERS??. without contact to M))
- 32 M: (*→)

33 Th: (.) (→*!!!) NO COME-HERE/LISTEN BATHE

34 M: “Du, tænker du på” BEFORE/“længe før,” “da du”/YOU SWIM/“svømmede”

35 TOGETHER/“sammen med”

36 M: [TINA/“Tina og” TANJA/“Tanja og” MAMA/“Mama”

37 Th: [NO- NO-NO-NO ((AS-IF-WHEN-ANGRY biting hand))

38 Th: FELT -LIKE-THIS-HERE((leaning over the table))

39 M: “dø:r, dø:r”((“do:or, do:or” a toy door is laying at the table))

40 Th: ((leans back))

41 00.04.07

42 M: (→*) >YOU/“du” TALK/“du snakker”< “om sån?”/JUMP/HOLE((one pointing finger in palm))

43 Th: [HOLE

44 M: [“hva er det for noe hul?”

45 Th: ‘POINTING’((tries to point to the head of M))

46 M: (→*) HOLE/”hul?”

47 Th: (→*) POINTING-TO-THE-HEAD((of M))

48 M: POINTING-TO-THE-HEAD((reinforces))/“Ska jeg tænke godt – inde i hovedet?”, I/“ska jeg”

49 POINTING-TO-THE-HEAD/“tænke godt?” (.) JUMP/HOLE((=DOLPHIN??))/“eller tænker

50 du på delfinfisk” (.) WATER/“i vandet” (.) JUMP/“der hoppede?”

51 Th: ((leaning over the table))

52 M: T(H) ((= THORMOD))/“Har Thormod” “lavet–“ TALK/”snakket” “sån lyde?”

53 M: [“knk kkn – kann ikke sige det” ((turns away)) “jamen det ligner jo på delfinlyde”

54 Th: [BITING-HAND: NO, NO! ((frustration))

55 (*→!!!) ((dragging hands of M close = COME-HERE-AND-TALK!))

56 M: POINTING-TO-THE-HEAD/“Og så tænkte du” WATER/“på vann”

57 JUMP/HOLE((=DOLPHIN??))/ “og den” (.) JUMP/HOLE((=DOLPHIN??))/“den

58 delfinfisken”

59 M: [JUMP/”som hoppede” WATER/“i vann”

60 Th: [YES, YES!((=smiling– very happy))

61 Th: (→*) DOG+repeatedly

62 Th: [DOG+rep

63 M: [DOG((reinforces))/”det var et dyr ja”, BIG/“et stort” DOG/“dyr” WATER/“som var i vann”

64 [(*→) “nu må du fortælle ellers så tolker jeg mig helt bort”

65 Th: [CLAP((accidental??)) BITING-HAND-AND-STOMPING-FOOT!!! ((=NO, NO, NO, NO??))

66 M: TAPPING-WRIST((of Th)) (*→) “fortæl om det var riktig”

67 Th: [SIGN((??)) WATER

68 M: [“((unclear))” “vann”

69 (→*) SIGN((??))/”((unclear))”

70 Th: BATHE

71 M: BATHE/"og den badet!", "du Thomas" ((arranges Th.'s chair)) "tænker du på" (→*) YOU/"du"
 72 POINTING-TO-THE-HEAD((with a twist of the wrist))/"tæn:ker du på" YOU/"da du"
 73 MOTHER/"og mama" WATER/"var i vann"
 74 [SWIM+rep./"og svøm:te hele dagen?" BATHE/"og badet?" ((lowers hands))
 75 Th: [((increasingly happy))
 76 M: "og så kom det" BIG/"sto:re store" DOG/"dyr?" (.) WATER/"i vann" "så:ne" JUMP/HOLE
 77 [JUMP/HOLE
 78 Th: ['(→*)' ((tries to pull M.'s hands close =LET-ME-SPEAK!))
 79 FELT-LIKE-THIS-HERE((rubbing leg from knee down + smiling!))
 80 M: "ja:a, ((unclear))!"
 81 Th: [BATHE
 82 M: ["syns du Thormod"
 83 (→*) T(H)/"syns du Thormod" BOY/"gutten" POINTING-AWAY((=deictic reference))/"der
 84 borte" TALK/"han snakket" "lidt lisom sån" JUMP/HOLE/"delfinfisk?" (.) TALK/"han
 85 snakket som" JUMP/HOLE/"delfinfiskene" JUMP/"som hoppet" WATER/"i vann?"
 86 [SAME/"var det samme? syns du?"
 87 Th: ['(→*)' ((tries to pull M.'s hands close =LET-ME-SPEAK!))
 88 (→*) FELT-LIKE-THIS-HERE((rubbing leg from knee down + smiling!))
 89 M: (*→) "fortæl mer du da!"
 90 Th: WASH [FELT-LIKE-THIS((sliding hands across table))
 91 M: [WASH((on Th.'s sliding hands))
 92 Th: COME-AND-FEEL-THIS((pulls(*R) M.'s hand towards the far edge of table)) FELT-LIKE-
 93 THIS((sliding(*R) hand along edge of table)), COME-AND-FEEL-THIS((pulls(*L) M.'s hand
 94 towards the radiator)) HOT(*L)((or POINTING-TO-THE-HEAD?)) POINTING-TO-THE-
 95 RADIATOR(*L)
 96 M: POINTING-TO-THE-RADIATOR/"hva me den?" HOT/"den er varm"
 97 Th: HOT ((with a bewildered look?))
 98 M: HOT/"den er varm" POINTING/"den der ovnen der borte"
 99 Th: ((turns away))
 100 00.07.30
 101
 102

(iii) Transcription of “Robin and the petit gervais”

Participants: **Ro**: Robin, deafblind child; **Ca**: Caroline, adult caretaker.

Transcriber:: Flemming Ask Larsen, 2003.

Note: Spoken language is included only by indications of Ca’s intonation markers of question ”?” and affirmation ”!”, and sounds of Ro.

1 00.00.05
2 Ca (→*) DRIN[KING/”?”
3 Ro [NO! ((pulls hand away))
4 Ca (→*) GLA[S (gives Ro a glass)
5 Ro [NO! (pushes the glass away)
6 Ca (turns [away from the table)
7 Ro [(reaches out towards Ca)
8 Ca (turns back to table??)
9 Ro (reaches out over table??)
10 cut
11
12 Ca [(waiting and observing Ro)
13 Ro [(elbows on the table, hands in the air, shaking hands)/”brrll, brrll”, (reaching out *R for Ca)
14 Ro (→*) ‘DONE’ SAME-MOVEMENT^SAME-PLACE+lower-lip (fingers downward on lower lip
15 = *DRINKING◊EATING*??)
16 Ca GLA[S (gives Ro a glass)
17 Ro [NO! (pushes the glass away),
18 LIKE-THIS-SENSATION^SAME-PLACE+mouth+contemplation(touches mouth in a
19 ‘thinking’-gesture)
20 cut
21
22 Ca [(waiting and observing Ro)
23 Ro [(waving from side to side = I’M-THINKING-ABOUT-WHAT-TO-SAY+contemplation??),
24 (reaching out *R for Ca while tapping *L on table), (→*) *DRINKING◊EATING* (fingers
25 downward on lower lip)
26 Ca GLA[S (gives Ro a glass, shakes head to herself)
27 Ro [NO (pushes the glass away), (→*) DONE *DRINKING◊EATING*(=EATING-PETIT-
28 GERVAIS??) SAME-PLACE+table^SAME-MOVEMENT+size (pointing *R to a spot on the
29 table and making an AS-IF-pointing-and-grabbing gesture)
30 Ca >[(→*) (leans toward Ro) “!”(=affirmative intonation) YOU-EAT+transactive/”?”<
31 Ro [(stops tapping *L) EAT+coactive

32 Ca (turns away to get the petit gervais)
33 cut
34 00.01.01
35
36

III. Graphic notation of 'Th and the dolphin'

In the thesis the notation of the whole sequence was included. Here, only the two first pages are presented to give an idea of the level of precision that is suggested.

transkription af:
 effort af:
 participant:

04.07.2003

hands with bow from 1000 g force

re-enters
 spray space
 and
 takes
 LP-A

hands
 to CSL

takes
 SP-A

hands
 to CSL

hands
 to SL-chin

T2

T2

WATER-PLAYING (x4)

TAKING
 SHOOTING
 O HOLE+CSL

hands
 to CSL

shifts
 to LP-A

T10

WATER-PLAYING (x5)

HOLE

seeks
 LP

108

107

IV. Notation conventions

- (1) SIGN Negotiated signs or proto-signs⁸³ are written in capital letters. If more words are necessary they are connected by dashes: POINTING-TO-RADIATOR. (SL)
- (2) 'SIGN' Not completed sign. (SL)
- (3) ^ Concatenation signs connect two or more signs performed as one (ex: POINTING-to-SAME-PLACE^GRABBING-SAME-SIZE). (SL)
- (4) + Adds additional information about modifications of the sign. Ex.: BATHE+coactive, DOG+repeatingly, EAT+transactive. (SL).
- (5) *R / *L Performed by right / left hand (only when significant). (FAL)
- (6) > < Said or done >quickly< (CA)
- (7) < > Said or done <slowly> (CA)
- (8) wo:rd The preceding syllable is prolonged (in speech). (CA)

Turn-taking markers

- (9) (→*) or FTT Forced Turn-Taking. * takes position as speaker. (FAL)
- (10) (*→) or FTG Forced Turn-Giving. The subject (*) changes position to listener. (FAL)
- (11) (←*) or FTR Forced Turn-Refusal. * refuses to take position as speaker. (FAL)
- (12) (.) Micro pause/hesitation. (CA)
- (13) (2:5) Timed pause. Duration in seconds and frames. (CA/FAL)
- (14) , and . Used as grammatical markers of sentence and phrase, as supposed by the transcriber.
- (15) [Overlapped by interruption/simultaneous signing from other(-s). Or signer interrupts or overlaps previous signer. Two (or more) brackets placed one above the other in two succeeding lines

⁸³ The term proto-sign is dealt with in depth in a separate chapter. This paper is suggesting a preliminary set of such proto-signs as the basis for the deafblind negotiation and acquisition of signs.

- indicates that these lines are performed simultaneously from the point of the brackets and onwards (CA).
- (16)] Optional. May be used to specify the endpoint of an overlap.(CA)
- (17) = Placed at the end of an overlapped line and at the beginning of the line where it is taken up again. (CA) If used inside parentheses it indicates identity.

Oral and Visual parts of the conversation

- (18) “speech” Oral language
- (19) “!” / “?” Affirmative/interrogative intonation. (FAL)
- (20) / Simultaneous speech supporting the sign (ex.: BATHE/”bade!”) (FAL)
- (21) (turns-head) Descriptions of movements, gestures, or acts are given in (single) parentheses (CA). Hyphenated (SL).

Comments and analytic remarks

- (22) ((subject)) Double parentheses indicate comments from the analyst. (CA)
- (23) ◇ Connects signs which have meaning components in their semantic potential, used in combination to form *one* new suggested sign. Ex: *EATING◇DRINKING* = EATING-PETIT-GERVAIS??). Also when ambiguous sign. (FAL)
- (24) ?? Suggestion (ex.: meaning of not yet negotiated sign, or description of unclear act or speech – see above). (FAL)

Turn-structure

- (25) I1 introduction of sign 1
- (26) C1 co-reference to sign 1
- (27) {I1,C1} adjacency pair
- (28) RI1 repetition of I1

- | | | |
|------|----|-------------------|
| (29) | MI | meta-introduction |
| (30) | MC | meta-co-reference |
| (31) | Rq | request |
| (32) | A | answer |

Hand-positions

- | | | |
|------|-------|--------------------|
| (33) | H-Pos | Hand-position |
| (34) | SP | Speaking position |
| (35) | LP | Listening position |
| (36) | -A | Hand-position A |
| (37) | -B | Hand-position B |
| (38) | -Ba | Hand-position Ba |

Ex.: LP-Ba = listening position in hand-position Ba

Sign loci

- | | | |
|------|--------|--|
| (39) | SL | Sign locus |
| (40) | CSL | Central sign locus |
| (41) | -chest | Place on signer's own body that is used as sign locus (here chest) |
| (42) | +Ma | Sign locus modification meaning that the sign locus is somewhere |

else than the signer's own body (here on Ma's body).

Ex.: SL-head+Ma = sign locus on Ma's head

Turn-transitions

- | | | |
|------|-------|---|
| (43) | T | Turn (numbered: T1, T2, T3, etc.) |
| (44) | TTr | Turn-transition (numbered: TTr1, TTr2, TTr3, etc.) |
| (45) | TTr+F | Forced turn-transition (numbering continuous with TTr; ex.: TTr1, TTr2+F, TTr3, etc.) |
| (9) | FTT | Forced turn-taking |
| (10) | FTG | Forced turn-giving |
| (11) | FTR | Forced turn-refusal |

Specifications of gestures and loci: hyphenated

Ex.: LIKE-THIS+deep-scar-from-fracture = proto-sign + specification of physical reference.

Ex.: hands-to-SL+head-of-Ma = gesture (movement to locus) + specification of physical reference

V. The signs of Th

(i) Norwegian tags

This appendix contained in the thesis the whole vocabulary of 120 signs as compiled by the mother of Th. Here only the sign that are used in the analysed video sequence are included. The numbers refer to the original list.

LISTE OVER ORD/TEGN SOM TH HAR SAGT SELV

Th er ikke konsekvent i hvilken hånd som er førende, heller ikke i håndstilling eller om han bruker bare en hånd eller begge.

Pr. mai 2003.

- 2. **BADE** (BATHE): begge håndflater mot brystet, føres parallelt ned og opp
- 9. **BUKSE** (TROUSERS): begge hender flat mot begge lår, trekkes oppover parallelt
- 13. **DELFIN** (DOLPHIN): h. peke- og langfinger støtes litt raskt inn i venstre hånds åpne håndflate [This sign was added to the list a good while *after* the video sequence that is analysed here was recorded]
- 16. **DU** (YOU): peke mot den andre personen
- 18. **DYR** (ANIMAL): samme tegn som for HUND
- 37. **HOPPE** (JUMP): h. hånds peke- og langfinger (de andre fingre bøyd) settes mot v. håndflate to ganger
- 38. **HULL** (HOLE): h. hånds pekefinger peker mot v. håndflate
- 45. **JEG** (I): h. pekefinger/hånd peker mot ham selv
- 51. **KLE PÅ** (to DRESS): begge håndflater føres parallelt nedover og innover på brystet
- 91. **SNAKKE** (TALK): h. hånd legges flat over hals og hake med fingertupper spredd utover munnen
- 113. **VANN** (WATER): hendene flatet ut, h. hånd legges med håndflaten oppå v. hånds overside
- 115. **VASKE** (to WASH): begge håndflater strykes frem og tilbake mot hverandre

(ii) Suggested dictionary

This dictionary contains the signs used in the conversation. They are listed in order of appearance.

(BADE) **BATHING**; **Core meaning**: Joyful (comforting) experience of the whole body being embraced by water: BATHING. **Origin**: The exact origin and early history of negotiation of this sign is not known. Never the less, knowledge of Thomas' experiences with this variation of a water scenario provides a means for understanding the experiential source of the sign. When Thomas started at the school for deafblind children at the age of seven, he was very insecure in this new setting. However, in the swimmingpool he felt safe surrounded by the water as he was. He spend a lot of time there. He learned how to walk on his own, and how to control the avilability of another person (the teacher) over distance, regulating proximity by feeling and manipulating the mouvement of the water. **Ordinary functions**: Speech acts: *Request* for having a bath (in a tub, pool or the like) (e.g. to ease pain); *confirmative* answer to a *suggestion* to have a bath; *Inquirering* if someone is bathing. Referential: *Telling* about someone (a person or an animal) bathing (e.g. in ritualised story telling scenarios).

(HUL) **HOLE**; **Core meaning**: HOLE. **Origin**: The exact origin is unknown. Th. has a wide range of experiences with holes of various kinds. He has a varied history of experiences of playing with fingers into and through holes, both his own fingers and fingers of other people. **Ordinary functions**: "There is a hole"; Telling about holes.

(VANN) **WATER-PLAYING**; **Origin**: Ritualised game by sink where water was pouring over his hands and he was slapping the surface of the water in the sink. Possibly the slapping of the surface of the pool as a means for regulating proximity (as above) is also a source for the meaning of this sign. Joyful slapping on surface of water making the water mouve. **Ordinary functions**: Speech acts: Fx. request for playing with hands in water. Referential: Telling about playing with hands in water. **Core meaning**: Making water surface move: WATER-PLAYING.

(VASKE) **WASHING-SMOOTH**; **Origin**: Introduced by the mother during washing routine in order to make distinctions between different water scenarios. In the original scenario he stood holding himself by the sink, while being washed. **Ordinary functions**: Reference to different aspects of his experiences in the situation of the washing routine: *Place* by the porcelain sink, and the *sensation* of rubbing smooth surface in water. **Core meaning**: The smooth sensation of the washing and/or the place of the washing routine: WASHING-SMOOTH and/or WASHING-SMOOTH^PLACE.

(BUKSE) **TROUSERS**; **Origin**: Introduced by adults during dressing routine. **Ordinary functions**: Primarily used by adults with conative functions. **Core meaning**: "On-sliding leg-wrapper": TROUSERS

(KLE PÅ) **DRESSING**; **Origin**: Introduced by adults during dressing routine. **Ordinary functions**: Speech acts: "Help me get dressed now" (imperative); "can I (get dressed and) go home now?" (request) etc. Used by adults with conative functions. **Core meaning**: DRESSING (GETTING-DRESSED).

CONTACT-FAILURE; **Origin**: Emotional expression of frustration in failed communication or broken contact. Negotiated into a reference to the emotional state where his frustration is so strong that he bites his hand and stomps his foot. **Ordinary function**: Declarative functions: "I am frustrated like this". Commenting: "No, you don't understand". Prohibition: "No, don't go away". Addressed emergency signal when contact failure occurs. **Core meaning**: frustration from CONTACT-FAILURE.

(DU) **YOU**; **Origin**: Negotiated from different turn-taking games, introduced by adults. **Ordinary function**: Used by adults in here-and-now contexts as deictic addressing him. **Core meaning**: pointing to YOU Thomas

addressing-you; When Thomas wants to address someone, the utterance can include a direct reference to the other person by Thomas grabbing, pulling or signing on this person.

JUMPING (transitive); **Origin**: Introduced as reference to the experience of “being jumped” lying on a trampoline. Negotiated into meaning jumping in general as a transitive action. Extended to signifying the act of making something (e.g. water) jump. **Ordinary functions**: reference to either *actively* “jumping” something, *passively* “being jumped” by someone, or the *intermediate* sensation of being jumped. **Core meaning**: JUMPING (transitive).

(HUND) **DOG**; **Origin**: The family had always dogs. He was afraid of the sound of the barking, but not of touching and being touched by the dogs. The sign was introduced in order to make him connect the scary barking sound with the safe sensation of warm furred and cold nosed creature sweeping by. **Ordinary functions**: Reference to “dog” both in here-and-now situations and in narratives about dogs. **Core meaning**: DOG.



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