

## SOME REMARKS ON TONAL ASPECTS OF MOTHER-CHILD COMMUNICATION.

Anne-Christine Bredvad-Jensen

Child Language Research Institute, Department of Linguistics and Phonetics,  
Lund University

In mediating messages the verbal signal is naturally considered as the most important means of communication, even if both somatic and vocal means are used at the same time. For the little child the situation is reversed as the child during his first year has to rely on vocal and on somatic means before he begins to develop verbal language during his second year. Even after his second year non-verbal means will continue to play a very important part in his communication. In his communicative efforts the child is supported by the adult partner who generally is an attentive, watchful and cooperative person. It can be argued (from an acquisitional point of view) that one of the main aims of the adult-child dialogue is to encourage and promote the child's endeavours to take and keep the initiative in a dialogue. What strategies does the child use to signal his intentions to the adult partner? What strategies does the adult use in order to make it possible for the child to fulfill his dialogue intentions? Are there specific tonal strategies which can be used, either by the adult or by the child?

If the child wants to call the adult's attention to something, he may use more or less extensively either of the three communication channels (or a combination of two or three), the verbal, the vocal and the somatic. Verbally through supplying or asking for information: "Look, it's like Granny's.", "What's this?" Somatically through grasping or pointing to something. Vocally through using a special voice quality or tonal configuration. For example a child may mumble loudly but inarticulately. Now is there a definite set of tonal configurations for the "attention-getters"? Is there any difference between those "attention-getters" which are mainly verbal (and/or somatic) and those which are mainly vocally manifested (or at least without a verbally formulated message)? Is there a difference in effectiveness among different "attention-getters"? (Effective = resulting in an adequate answer from the adult.) Well, these are the questions I am interested in, but here I will only give a few illustrative examples.

The dialogue episodes have been chosen from a child oriented point of view\*. A dialogue episode is considered to begin when the child initiates a "new paragraph" in the ongoing dialogue, by introducing a new topic/subtopic. It seems relevant to set the boundaries in this way because then the interactionally most interesting situations will be chosen for analysis. Will the adult respond to the initiative in an adequate way and so join the dialogue on the child's conditions so that the child may carry out his intentions? (Does the child receive an adequate answer or does the adult e.g. proceed with giving more redundant information which

\*The material chosen for analysis originates from two different projects. 1) Three-year-old children from Umeå in a project headed by Jan Winberg and Peter de Chateau, see 1982 and references there. This project investigates the long term effects of different birth routines. One part of the project deals with linguistic matters and it is headed by Ragnhild Söderbergh, see 1987 for the latest version of her dialogue model based on this material. 2) A longitudinal project, headed by Ragnhild Söderbergh, investigating the syntactic development of five preschool children from Stockholm. See Söderbergh 1973 and Lange & Larsson 1977. In project 2 the dialogue material has been recorded on audiotapes supplemented with a simultaneous commentary tape recording whereas in project 1 both videotape and audiotape recordings have been made. In both projects children are involved in free play situations/bookreading.

is not asked for.)

In the dialogue model of Söderbergh (latest version in Söderbergh & Bredvad-Jensen 1987) there is a verbal component consisting of two model codes, one of which is the dialogue flow which is relevant for this discussion. The dialogue flow shows "how topics are introduced and how the two partners jointly contribute to the development of these topics and to dialogue coherence" (op. cit. p. 371). Among symbols used in the dialogue flow are the following:

==> introduction of topic

--> continuation of topic implying that new aspects are introduced

<--tying on to the partner's utterance

In the first dialogue below called "The girl-doll", Embla (2 years, 6 weeks) and her mother are looking in a children's book together. Embla introduces a new topic by asking the name of a big doll in the book (Ch1) at the same time as she points to it. Embla then calls the doll "That girl." Mother does not answer the question but questions whether it really is a girl. Embla consents and reformulates her question (Ch3), asking the name of the "doll she", (a possible interpretation according to the transcription, which is the result of at least four independent listeners). Mother says she does not know and turns the question back to Embla, who gives no answer (Ch5). Mother argues that it is a doll. Apparently she has not interpreted Ch3 as a consent. Embla ascertains that it is a doll (Ch7) not a girl (Ch9). Mother confirms. Embla introduces a new aspect of the topic by asking whether the doll can shut its eyes (Ch11) and mother supposes that this is the case.

#### THE GIRL-DOLL

Ch1: /he:/ DEN flickan?(*What's the name of THAT girl?*)

M2: Är de DÄR en flicka. - TYCKER du det? (*Is THAT a girl. - Do you THINK so?*)

Ch3: Nä. - Heter /då ho/ - Hm. (*No. - What's the name /doll she/ - Mm.*)

M4: Jag VET inte. Vad TROR du den heter? (*I don't KNOW. What's her name, do you THINK?*)

Ch5: Hä. (*Ha.*)

M6: Jag tror det är en DOCKA ser du. (*I think it's a DOLL, you see.*)

Ch7: Hm. - Docka. (*Mm - Doll.*)

M8: Mm. (*Yeah.*)

Ch9 INTE flicka. (*NOT girl.*)

M10: Nää. - EN FLICKDOCKA. (*No. - A GIRL-DOLL.*)

Ch11: Kan den BLUNDA den? (*Can she SHUT her eyes, the doll?*)

M12: Ja De/det kanske den kan. (*Yes THAT/that maybe it can.*)

Comparing Embla's questions in this dialogue, Ch1 will be coded as ==> , as a new topic is introduced, whereas Ch3 and Ch11 will be coded as --> instead, as these questions add new aspects to the old topic. Looking at the tonal configurations of these questions they seem somewhat contra-intuitive, as the fo-range is considerably wider for Ch3 (ca 80 Hz) and Ch11 (ca 150 Hz) than for Ch1 (ca 45 Hz) and as the fo-maximum is considerably higher for Ch3 and Ch11, see table 1. One could hypothesize that calling a person's attention by introducing a new topic should result in a wider range and a higher maximum in comparison with continuing the development of the topic, which is a joint enterprise, where the partner's attention has already been attracted, but here the opposite is the case. Is this due to the simultaneous

pointing gesture in Ch1? It might be argued that the attention-calling function of the verbal/vocal aspects of the message might be diminished if an attention-calling gesture is added, as in this case. And/ or perhaps it is too complicated for the little child to expand on all three aspects at the same time. Among the material presented in Söderbergh & Bredvad-Jensen 1987 there is a child who stops playing with an object (with her hands) while formulating new sentences (p. 376). Naturally it is impossible to draw any conclusions whatsoever from this sample alone, but Schaffer, 1984, has shown that in non face-to-face dialogues between adults there was a strong correlation between high beginning Fo-range and topic continuation as opposed to topic change. This also holds for face-to-face communication, but only as a clear tendency. If we compare Ch7 and Ch9 in "The girl-doll", both of which can be classified as topic continuation without adding new aspects, that is <-- , with Ch1 it is evident that the same relation holds for them as for Ch 3 and Ch11 in comparison with Ch1. This is maybe more startling as Ch7 and Ch9 are statements (although with contrastive function) whereas Ch3, Ch11 and Ch1 (!) are Yes/No - questions.

TABLE 1

	fo-range	fo-max	fo-min
Ch1	43	312	269
Ch3	78	370	292
Ch7	73	416	343
Ch9	116	400	284
Ch11	151	400	249

In the next dialogue, "The towel", the child tries to take away a towel which is fixed onto a wall in a doll house asking mother how to do it (Ch1). Mother explains why it should not be taken away. After a pause the child argues that it might be used in this case because 1) it is intended for drying oneself (Ch3) and 2) Daddy is wet, because he washed his hands (Ch 5). Mother consents (M6).

THE TOWEL

- Ch1: Men hur går de å få bort de HÄR? (*But how is THIS to be taken away?*)
- M2: Den tror jag inte man SKA ta bort. Jag tror faktiskt att den e FASTKLISTRAD här. Den ska liksom bara HÄNGA där,så att man - ser att de brukar hänga handdukar där. (*I don't think you SHOULD take that away. I think it has been PASTED on here. It should only sort of HANG there, for you to - see that they usually hang towels there.*)
- (pause)
- Ch3: Mh det här kan ju tvätt/ öh TORKA sig. (*But this you may wash/ eh DRY yourself.*)
- M4: Mm. (*Yeah.*)
- Ch5: Han e så våt/ han öh därför han öh TVÄTTA händerna - <PAPPAN>\*. (*He is so wet/ he eh WASHED his hands - the <DADDY>\**.)
- M6a: <Mm>\*. (<Yes>\*.)
- M6b: Mm. (*Yes.*)

\*uttered simultaneously

An analysis of this episode is presented in Söderbergh & Bredvad-Jensen 1987. It is evident from that analysis that this mother is a clear representative of the *supportive* style (as Wells *et al.*, 1979, put it). Here we can see that she gives an adequate answer, which stimulates the child to verbal creativity and that she waits with a long pause for the child to formulate his verbal message and then only stimulates him by uttering the backchannel items in M4, M6a and M6b. The tonal configurations as such of these backchannel items also exhibit supportiveness because they are in the mother's very upper range; a range which more naturally belongs to the fo-range of the child. In two cases (M4 and M6a) the mother even begins with the same fo-value as that at the end of the child's preceding utterance. Looking superficially at the curves it looks like the child continues to speak instead of the mother. These utterances exhibiting tonal coherence on the part of the mother are quite different from the "normal" utterances in M2 all of which are uttered in a lower range.

This is probably an example of a specific tonal strategy used by an adult to promote the child's linguistic performance but to draw any conclusions from one single episode is impossible, as is also the case with the girl-doll episode.

#### BIBLIOGRAPHY

- Lange, S. & Larsson, K., 1977. Studier i det tidiga barnspråkets grammatik (Studies in early child grammar. With an English summary). Stockholms universitet: Institutionen för nordiska språk, Projektet barnspråkssyntax, Stockholm.
- Schaffer, D., 1984. The role of intonation as a cue to topic management in conversation. Journal of Phonetics, 12, pp. 327-344.
- Söderbergh, R., 1973. Project child language syntax and project early reading. Stockholms universitet: Institutionen för nordiska språk, Projektet barnspråkssyntax, Stockholm.
- Söderbergh, R. & Bredvad-Jensen, A.-C., 1987. A dialogue model and its application in a free play situation. In Lilius, P. & Saari, M. (eds.) The Nordic Languages and Modern Linguistics 6, Proceedings of the Sixth International Conference of Nordic and General Linguistics in Helsinki, August 18-22, 1986, pp. 369-395, Helsinki University Press, Helsinki.
- Wells, G., Montgomery, M. & MacLure, M., 1979. Adult-child discourse: Outline of a model of analysis. Journal of Pragmatics, 3, pp. 337-380.
- Wiberg, B. & de Chateau, P., 1982. Long term effect on mother-infant behavior of extra contact during the first hour post partum. IV. Study design and methods. In Anthony, E.J. (ed.) The Child and his Family, pp. 105-128, Wiley and Son, New York.
- Winberg, J. & de Chateau, P., 1982. Early social development: Studies of infant-mother interaction and relationships. In Hartrup, W.W. (ed.) Review of Child Developmental Research, 6, pp. 1-44, The University of Chicago Press, Chicago.