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COMPENSATORY STRATEGIES OF HEARING-IMPAIRED SPEAKERS *

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Abstract

In a study of hearing-impaired persons in intra-group communication we have found differences in production style compared to normal-hearing persons. The differences, which we interpret as compensatory in nature, relate to the use of visual signals, which could be seen as a step towards sign language rather than making the speech signal as clear as needed.

COMPENSATION OF HEARING DEFECT, I

When we discuss the problems of communication for hearing-impaired persons (HIPs) we generally think of situations with one HIP who communicates (or tries to) with one or more normal hearing persons (NHPs). In such a situation the HIP takes part in asymmetrical communication, communication on unequal terms, due to unequal hearing status. The NHP sets the conditions for the communication. Normally the NHP will have small problems understanding the HIP but the reverse is not true. If the HIP has a "speech defect" it is defined in relation to the speech of the NHP, and seems to effect communication marginally.

In such communication compensation, if any, is accomplished either by the normal hearing speaker or the hearing-impaired listener. To make the speech more understandable the speaker should speak clearer and slower, face towards the (hearing-impaired) listener, avoid noise and sometimes use a microphone. To improve her understanding the hearing-impaired listener should look at the speaker and sometimes use a hearing-aid. That is, in terms of the hearing-impaired person (HIP) the focus on her is as a listener, who should use lipreading and hearing-aid to understand the speech of normal hearing persons better. These compensatory strategies stress a static relation between the HIP and the NHP; the NHP remains the speaker and HIP remains the listener.

Other types of compensatory strategies have been observed in conversations where HIPs participate. One is to ask the speaker to repeat. There seem, however, to be conversational restrictions on how many times in a row you may ask for repetition, and also how often this may be done in the conversation. In conversation, the speaker requires confirmation now and then on what she has said. If you do not want to reveal that you have not understood, you might give an empty confirmation. HIPs have described themselves as "yes-people". Yet another strategy is to avoid conversations. In conversations with more than two participants the HIP may choose to remain silent and passive. In dialogues the HIP may choose to try to close the conversation. The problem of the HIP lies in understanding. If you can take control over the conversation then you can speak and do not have to listen.

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COMPENSATION OF HEARING DEFECT, II

A different perspective is to study the communication between HIPs, that is, to study the HIP as a speaker when speaking to another HIP, and the HIP as a listener when listening to another HIP. In the ideal situation, and with fairly equal hearing status, the HIP will take part in *symmetrical communication*, communication on equal terms. This field has not been studied as much as the asymmetrical communication described above.

A number of questions are automatically raised. *Will HIPs be able to have fluent communication, or will the communication break down due to mutual misunderstandings? Will the participants ask for more repetitions? Will the participant develop special strategies to facilitate the communication?* These questions and others will be discussed in the reports from the project (see Hellman, Nordling, & Dufberg, forthcoming). Here we will try to give a partial answer to the last question.

Communication between HIPs can be studied that from different perspectives. In this paper we will discuss compensatory strategies in the production of speech. Looking for compensatory strategies *in production* might seem odd when a hearing defect does not directly effect production. Our underlying assumption is that when all members of a language community have the same ability to receive the language signals (hearing in terms of spoken language) then production will be adjusted to that ability of reception. If we found compensatory strategies in the production of HIPs then what they compensate for could give us an indication of what the HIPs have a need to compensate for as a listener. This could be a valuable piece of information in the search for a model of speech comprehension.

SPEECH MATERIAL, INFORMANTS AND RESULTS

The project has collected data from normal hearing and hearing impaired pupils (NHP and HIP, respectively) aged 13-16. The HIPs attended classes of HIPs only at the same public school in Stockholm as the NHP. Using pupils from classes with HIPs only is very important. *If any group of HIPs would develop special strategies in communication a group with a high degree of intra-group communication is a most likely candidate.* We think that the classes with HIPs only are such candidates.

The pupils were video recorded during free conversation or controlled retelling of an animated film. In part one a total of 18 HIPs (152 minutes) and 12 NHPs (91 minutes) participate in recordings of free conversations. In part two 10 HIPs and 6 NHPs retell the film, each person twice. Part two was done to study in more depth some of the (preliminary) results of part one. The material has been transcribed, but the interest of the project has not been phonetic deviations so the transcription level is orthographical.

The main difference in the production style of HIPs and NHPs in our study could, not surprisingly, be summarized in the higher use of visual or tactile signal among the HIPs. Notable is gesture of the whole arm to mark the wish to take the turn in the conversation. During speech the HIPs use gestures to a higher degree. These gestures also seem to be more complex, for example a wider variation of hand forms, than those of the NHPs. The speaker also seems to make sure to have visual contact with every listener. But we have not seen any clearer or slower speech in conversations between HIPs than between NHPs. We interpret the differences we have found as compensatory, and as being adjusted to the need of HIPs.
CONCLUDING REMARKS
The compensatory strategies that the HIPs seem to prefer are rather a step towards sign language than an effort to make the speech signal, as such, as clear as needed.

Reference