

From verbal nonfluency to interactive fluency in Broca's aphasia

Anu Klippi

University of Helsinki, Department of Phonetics, Post Box 35 (Vironkatu 1 B)

00014 UNIVERSITY OF HELSINKI, FINLAND

Phone: +358-(0)9-191 7915, Fax: +358-(0)9-191 8671

Anu.Klippi@helsinki.fi

Our knowledge, how the brain controls and interrelates gesture and speech, is still limited. An interesting branch of the study has been the relationship between aphasia and nonverbal behaviour. The main feature of aphasia is the impairment of communication via natural language. One of the most significant questions is, whether gestures may substitute or compensate for speech in the event of speech disturbance. Several investigators have found that aphasic speakers use more nonverbal behaviours than do normal speakers and many of these studies suggest that aphasic speakers compensate for their verbal deficit by increasing the frequency of their nonverbal behaviour (see e.g. Klippi 1996). In addition, some researchers suggest that the type of aphasia relates to the type of gestures used in communication. It is claimed that Broca's aphasics use more simple, unelaborated nonverbal units with a high degree of referentiality, which is in accordance with their verbal output, whereas Wernicke's aphasics have gestures that are vague and uninterpretable like their speech (see e.g. McNeill 1992). On the other hand, e.g. Glosser et al. (1986) provided evidence that aphasic speakers are impaired in their gestural communicative competence under natural conditions of communication.

The subject of this study is a female right-handed speaker (M) with Broca's aphasia. She became globally aphasic after a complication in an operation. She also suffered mild right-sided upper limb paralysis. In the early stages of aphasia, her speech was extremely slow and laborious, with severe agrammatism and word-finding difficulty. At the time of the data collection, her aphasia was in a chronic stage.

Two communication conditions were administered. The first situation was a picture description task taken from Western Aphasia Battery (Kertesz 1982), which is used to measure the spontaneous speech of an aphasic speaker. The second situation involved a free, face-to-face conversation between the aphasic speaker and the researcher. The researcher was well acquainted with the aphasic speaker so that the conversation was quite informal, and the topics dealt with the speaker's life. The physical context remained constant in both situations, the only difference being the speaker's orientation to the speech situation.

The analysis of case M showed the great variation of using nonverbal behaviour in accordance with speech in different contexts. The most striking difference in this comparison was that in conversation, her nonverbal behaviour was very rich quantitatively and qualitatively, whereas in the picture description task it was rather limited. Speaker M clearly oriented to the verbal production in the picture description task and her verbal output was very hesitant and nonfluent with long pauses. The rate of nonverbal behaviour was very low compared to conversation and no sign of compensatory nonverbal behaviour was noted. In contrast, the conversational context showed a greatly different picture. M's behaviour changed from a slow, hesitant speaker to fluent conversational participation with split-second turntaking and with most rich nonverbal behaviour which facilitated her speech and/or conveyed meanings *per se*. In addition, interesting synchronized movements were observed between M and the researcher.

My aim is to raise methodological questions in the study of the relationship between aphasia and nonverbal behaviour. Based on the case M, my claim

is that intraindividual variation in using nonverbal behaviour may be very large in aphasic speakers as in normal speakers. It should not be ignored that communication is a social act and heavily dependent on the contextual factors. This means that detailed studies of aphasic speakers should be done in different contexts to get a broader view of the relationship between aphasia and nonverbal communication.

REFERENCES

Glosser, G., Wiener, M. & Kaplan, E. (1988) Variations in aphasic language behaviours. *Journal of Speech and Hearing Disorders* 53, 115-124.

Kertesz, A. (1982) *The Western Aphasia Battery*. USA: Grune & Stratton.

Klippi, A. (1996) *Conversation as an Achievement in Aphasics*. *Studia Fennica Linguistica* 6. The Finnish Literature Society.

McNeill, D. (1992) *Hand and Mind. What Gestures Reveal about Thought*. Chicago: The University of Chicago Press.