

On Linguistic and Interactive Aspects of Infant-Adult Communication in a Pathological Perspective

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Abstract

This is a preliminary report of a study of some linguistic and interactive aspects available in a adult-child dyad where the child is partially hearing impaired, during the ages 8 - 20 months. The investigation involves a male child, born with Hemifacial Microsomia. Audio and video recordings are used to collect data on child vocalization and parent-child interaction. Eye-tracking is used to measure eye movements when presented with audio-visual stimuli. SECDI forms are applied to observe the development of the child's lexical production. Preliminary analyses indicate increased overall parental interactive behaviour. As babbling is somewhat delayed due to physical limitations, signed supported Swedish is used to facilitate communication and language development. Further collection and analysis of data is in progress in search of valuable information of the linguistic development from a pathological perspective of language acquisition.

Introduction

The typical linguistic development during infancy can be regarded as the result of the interaction between biological and environmental factors that leads to the child's language converts to the surrounding language. According to the Ecological Theory of Language Acquisition (Lacerda et al., 2004a), early language acquisition is an emergent consequence of multi-sensorial embodiment of the information available in ecological adult-infant interaction settings. In agreement with this theory, the basic linguistic referential function emerges from at least two of the sensory dimensions available in the speech interaction scene (Lacerda, 2003; Lacerda, Gustavsson & Svärd, 2003). If there are restraining biological conditions or a lack of adequate interaction with the environment, the child's linguistic development generally will deviate from the expected age dependent competence of communication. During typical circumstances, a one-year old child starts to use adult-like word forms. By two years of age, the

child has developed a larger vocabulary and starts to use two-word sentences or more in communication with its environment. If the auditory channel of information is disturbed, the means of integration of stimuli input is disturbed which can result in a linguistic disturbance, which also can affect the ability to produce comprehensible speech (Öster, 2002).

Humans seem to have a propensity to integrate the synchronic audio-visual stimuli that is accessible in a communicative situation (Bahrick, 2004). For example, when adults are speaking to infants, they tend to repeat representations of target words as denomination of whatever object the child is focusing on at the moment. Characteristic for this kind of interaction is that the adult pronounces several sentences containing the target word, often in final position, while following the infant's gaze. Target words that are pronounced isolated in a repetitive way has a significant positive effect on the first stages of the development of vocabulary (Brent & Siskind, 2001). In a perspective of language development, adults' behaviour can be regarded as an efficient way of producing a correlation between the words and sentences and the object on which the infant is focusing. An implicit meaning for the target word may arise as a result of automatic association between the sensory representations that show highest correlation (Lacerda, 2003). The learning mechanism that builds on associations of different sensory impressions is most relevant for learning of the first words, at the early stages of linguistic development.

In a natural speech communication situation, competent speakers and listeners rapidly achieve an effective level of information exchange by adjusting to each others communication needs (Lacerda et al., 2004b). Infants generally learn to use babbling in a communicative way very early in life. When the communication channels are defect in some way, the manner of communication change by force of nature. As the ambient language of infants very commonly is dominated by IDS, Infant Directed Speech (Fernald et al. 1989), this is one of the means of communication the parents of a

