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Prosodic Gestalts in Early Language Acquisition

The article presents prosodic phenomena in sung and spoken speech with infants and discusses their role as ›good‹ gestalt forms in early language acquisition. Adopting the Prosodic Bootstrapping Hypothesis (Gleitman/Wanner 1982), the article argues that language acquisition is a gestalt learning process that is basically built on the poetic function of language (Jakobson 1960, 1970). During this process, infants discover equivalent elements of sound in speech input, group them into sound classes and relate them to grammatical and lexical functions. Thus, the structure of the input plays a major role in language acquisition. Examples from field recordings show that infant-directed speech (Motherese or Babytalk) as well as infant-directed songs and rhymes provide optimal poetic structures that render sound equivalence classes more salient. This might help the infant to acquire its native language more readily.

The first section introduces the Prosodic Bootstrapping Hypothesis. The problem of how infants discover the abstract grammatical/lexical system of their native

language is still not entirely solved. Early language acquisition researchers have posited that, in the beginning, infants discover abstract grammatical and lexical categories via the phonic structure of a speech signal. This claim relies on the facts (1) that infants are very sensitive to the distribution and quality of acoustical properties in speech signals, (2) that there are language-specific mapping rules that relate phonological constituents to grammatical/lexical constituents and (3) that the speech input infants receive from adults is especially rich in phonological structure. As shown in this section, Prosodic Bootstrapping can be translated as a process that is poetically driven: Infants have to discover horizontal and vertical classes of equivalent sound structures (e.g. recurring consonant clusters at the end or beginning of words, syllable or stress templates) to find out about underlying semantic and syntactic meaning. Section two shortly summarizes the literature on infant-directed speech and singing. As research shows, both registers share similar prosodic features. Additionally, infant-directed singing is a very common speech mode during the first year of life – although it is rarely mentioned in connection with language acquisition. In section three, two examples demonstrate how the speech production of infants mirrors properties of infant-directed speech and singing.

In section four, two guidelines are proposed to define optimal poetic structures that might facilitate language acquisition in the first year of life. Firstly, there should be prominent, recurrent prosodic events and structures that can be perceived as a class of equivalence. Secondly, these classes of equivalent prosodic events and structures must be projected by rule onto lexical, morpho-syntactic or pragmatic structures of the language. It is then put forward that Motherese, children's nursery rhymes and songs constitute a continuum of optimal poetic structures based on the Gestalt principles of similarity, contrast and common fate (Wertheimer 1922, 1923). Examples from actual field recordings in Russian, French and German speaking families show in detail how poetic structure emerges spontaneously in infant-directed speech and singing. An important finding of the analysis is that the language-specific prosodic systems seem to restrain which prosodic features can be stylized as equivalent events and structures. Furthermore, there is evidence for different levels of optimal poetic structure: Classes are built on rhythmical, metrical, melodic and harmonic equivalence. These results suggest that it is worthwhile to consider the whole range of parental communication including rhyme and song in further studies on language acquisition.

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