

## Acquisition of Speech in a Nonverbal Adolescent with Autism

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**Objective:** To determine if a training program focusing on communicative intent and conceptual abilities could lead to the development of speech/language functions in a previously nonverbal adolescent with autism.

**Background:** Individuals with autism who fail to develop speech normally, or regress to a nonverbal state, rarely develop speech after age 5, and none have been reported to develop speech after age 13 (Pickett et al.: Speech acquisition in older nonverbal individuals with autism: a review of features, methods, and prognosis. *Cogn Behav Neurol* 2009; 22(1): 1-21).

**Design/Methods:** This was a single-case, multiple-baselines study. The subject, AI, had regressed into a nonverbal state at approximately age 2. Several specialty centers independently diagnosed him as being autistic, nonverbal, and low functioning. Prior to age 12, there had been episodic, unsuccessful attempts to teach him speech and signing. At age 12, AI began an immersive home education program, focusing first on establishing communicative intent and conceptual abilities, through a visual pictographic/symbolic communication system. Oral speech and manual signing were shaped next.

**Results:** By age 14, he began voluntarily vocalizing understandable sounds; by 16, he had recognizable single words. At age 20, he has a spontaneous, non-cued, oral expressive vocabulary of approximately 60 words, combined into utterances as long as 4 words. One-, two-, three-, and four-word utterances comprise 47%, 23%, 27%, and 3% of his spontaneous productions, respectively. He demonstrates flexibility in word choice using the sentence frame "I want \_\_\_". He initiates spontaneous requests approximately 7 times per hour. His oral speech production as well as auditory comprehension abilities are not dependent upon specific training efforts; for example, they persist over breaks in targeted training.

**Conclusions/Relevance:** The initial obstacles to speech acquisition in at least some such cases may be communicative intent and conceptual structure, not auditory comprehension deficits or oromotor dyspraxia. These obstacles may also be relevant in considering the forces that originally drove the evolution of human speech and language.

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