Understanding the nature of apraxia of speech: theory, analysis, and treatment

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ABSTRACT

Researchers have interpreted the behaviours of individuals with acquired apraxia of speech (AOS) as impairment of linguistic phonological processing, motor control, or both. Acoustic, kinematic, and perceptual studies of speech in more recent years have led to significant advances in our understanding of the disorder and wide acceptance that it affects phonetic-motoric planning of speech. However, newly developed methods for studying nonspeech motor control are providing new insights, indicating that the motor control impairment of AOS extends beyond speech and is manifest in non-speech movements of the oral structures. We present the most recent developments in theory and methods to examine and define the nature of AOS. Theories of the disorder are then related to existing treatment approaches and the efficacy of these approaches is examined. Directions for development of new treatments are posited. It is proposed that treatment programmes driven by a principled account of how the motor system learns to produce skilled actions will provide the most efficient and effective framework for treating motorbased speech disorders. In turn, well controlled and theoretically motivated studies of treatment efficacy promise to stimulate further development of theoretical accounts and contribute to our understanding of AOS. The debate over the precise characterization of acquired apraxia of speech (AOS) has been active for many years. Researchers have interpreted the behaviours of individuals with AOS as an impairment of linguistic phonological processing, motor control, or both. While the notion of AOS as a phonetic-motoric disorder is now generally accepted, it frequently co-occurs with aphasia and differentiating between the respective phonetic-motoric and linguistic impairments has proven difficult. This paper presents the most recent developments in theory, methods, and treatment to examine and define the nature of AOS.