



Plenary lecture: Brain asymmetry and language processing

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I will review research on asymmetry of language processing in the left and right cerebral hemispheres, focusing on dichotic presentations of consonant-syllable pairs, and the application of this approach to clinical groups. Thus, a key objective in our research has been how speech processing is organized in the brain, and how this is impaired in clinical groups. We have been particularly interested in how higher cognitive processes, like attention and executive function, modulates the right ear advantage typically seen in the dichotic listening paradigm, thus looking for bottom-up and top-down information processing interactions. We have also validated the behavioral results through simultaneous recordings of BOLD fMRI and ERP signals from the brain. We have applied these approaches to a variety of clinical groups, including children and adults with dyslexia and SLI, and in patients with localized brain lesions. A more recent interest is studies of auditory hallucinations in schizophrenia, with the hypothesis that auditory hallucinations are internally generated speech mis-attributions that may originate in the speech perception areas in the upper part of the left temporal lobe plane.