
Rose F. Kennedy Intellectual and Developmental Disabilities Research Center (IDDRC)
Seminar Series

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Brain correlates of selective attention to language: implications for reading acquisition



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**Van Etten (Room 1C-1):
11:30am, Monday, December 3rd, 2012**

Biographical note: Dr. Yoncheva is a cognitive neuroscientist interested in questions at the intersection of attention, learning, and language in typically developing and clinical populations. Dr. Yoncheva was awarded an academic scholarship to pursue undergraduate studies in neuroscience and mathematics at Kenyon College. In 2004 she was granted admission to the Neuroscience program at the Weill Cornell Graduate School of Medical Sciences. Her training included animal behavioral assays, adult and pediatric neuroimaging: fMRI, topographic ERP and non-parametric statistical techniques. Dr. Yoncheva's thesis work investigated how selective attention to phonology modulates reading-related cortical responses. After earning her Ph.D. in 2010, she joined the Educational Cognitive Neuroscience Laboratory at Vanderbilt University to conduct post-doctoral research, examining the impact of selective attention on the rise of expertise as an individual learns novel reading systems.

Abstract: Selective attention has been well-characterized in systems-level studies in the visual and auditory modalities, yet less empirical work has examined the neural mechanisms by which attentional processes operate on more complex, domain-specific information such as phonological codes within syllables. I have been investigating the notion that selective attention to phonology plays a central role in modulating perceptual encoding of spoken and visual word forms, and the integration of phonological and spelling information that is critical to the development of literacy (McCandliss & Yoncheva, 2011). The first part of this talk presents complementary fMRI and high-density ERP studies isolating the mechanisms that mediate selective attention to phonology and the temporal dynamics of their impact. The second part of the talk presents direct evidence that a learner's selective attention to phonology during training shapes their visual word perception and recruitment of reading expertise. This work provides a model context for further investigation of how selective attention might relate to an individual's learning dynamics during typical and atypical reading development.