

Liu, YF. & Comeau, G. (2008, June). *Perceptual span in music reading: Effects of notational complexity*. *The Neurosciences and Music III: Disorders and Plasticity*. McGill University, Quebec, QC.

Recently researchers studying music reading have been looking at perceptual span. It has been established that perceptual span for pianists is more than two beats and less than four beats horizontally. Reading skills and harmonic difficulties did not affect the span size (Gilman & Underwood, 2003; Truitt et al., 1997), but notational complexity did have an impact on eye movement during sight singing (Goolsby, 1994); this effect might influence the perceptual span. However, no research to date has studied the relationship between notational complexity and perceptual span in piano sight playing. Our research was designed to study the effects of notational complexity on the perceptual span of university piano major students during piano sight playing by using the moving window paradigm: only a portion of music appears as eyes are moving. Four window conditions (two beats ahead, four beats ahead, six beats ahead, and no window) were applied to all sight-reading excerpts at the RCM grade 6, 7, and 8 levels. All excerpts were paired and each pair contained one simple and one complex example of visual information; eye movement was recorded with Eyelink II, a head-mounted, binocular eye-tracking device. Data analysis was based on the paired excerpts across the three grade levels, and within the same grade level, with the purpose of examining whether notational complexity interacts with the perceptual span. A second condition was applied with different but equivalent stimuli: notes were removed as the eyes moved forward, making it impossible to look back at previous notation.