

## 2016 MTNA Pedagogy Saturday: Exploring How We Learn Music

### *Are We Born to Make Music?*

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To get an online version of this handout with embedded links, go to [www.themusiciansbrain.com](http://www.themusiciansbrain.com), click on Links in the menu, scroll down to MTNA 2016

You will find additional information concerning the topic of this presentation in posts on my blog, The Musician's Brain [www.themusiciansbrain.com](http://www.themusiciansbrain.com) under the categories of **Alzheimer's and music, Brain hardwiring, Cognition, Infants and music, Infants and language, and Music cognition.**

#### **Infant and music research:**

Corbeil, M., Trehub, S., & Peretz, I. (2015). Singing delays the onset of infant distress. *Infancy*. Advance online publication. doi: 10.1111/infa.12114. [pdf](#)

Gerry, D, Unrau, A, and Trainor, LJ (2012). Active music classes in infancy enhance musical, communicative and social development. *Developmental Science*, 15(3), 398-407 [View Abstract](#)

Hannon, E. E., & Trehub, S. E. (2005). Tuning in to musical rhythms: Infants learn more readily than adults. *Proceedings of the National Academy of Sciences USA*, 102, 12639-12643. [pdf](#)

Hannon, E. E., & Trehub, S. E. (2005). Metrical categories in infancy and adulthood. *Psychological Science*, 16, 48-55. [pdf](#)

Partanen, E., Kujala, T., Tervaniemi, M., & Huotilainen, M. (2013). [Prenatal Music Exposure Induces Long-Term Neural Effects](#). *PLoS ONE*, 8(10).

Trehub, S. E. (2010). In the beginning: A brief history of infant music perception. *Musicae Scientiae*. [pdf](#)

Trehub, S. E. (2001). Musical predispositions in infancy. *Annals of the New York Academy of Sciences*, 930, 1-16. [pdf](#)

Winkler, I., et.al. (2009). Newborn infants detect the beat in music. *Proceedings of the National Academy of Sciences*, 106(7).

Zentner, M., & Eerola, T. (2010). Rhythmic engagement with music in infancy. *Proceedings of the National Academy of Sciences*, 107(13).

### **Edwin Gordon:**

Gordon Music Learning Theory

Edwin Gordon. Roots of Music Learning Theory and Audiation, 2011

Edwin Gordon. NCKP Keynote, 2015

### **Other:**

Annie Jessy Curwin, 1898, Music Teaching, *The Parents' Review*, Vol. 9, no. 7

### **Books:**

**Peter Brown, Henry Roediger, Mark McDaniel.** 2014. Make it Stick: the science of successful learning

**Benedict Carey,** 2014. How We Learn: the surprising truth about when, where, and why it happens

Neither the Peter Brown nor Benedict Carey books are about music, but musicians can make use of the information. Both look at recent discoveries in cognitive psychology and other disciplines to show how much we think we know about learning is actually wrong. Give techniques for more productive learning and memory.

**Charles Darwin,** 1871. The Descent of Man. Contains a few pages about music's original role in sexual selection.

**Steven Mithen**, 2006. The Singing Neanderthals: the origins of music, language, mind, and body. Music as fundamental to the human condition, existing before language.

**Steven Pinker**, 1997. How the Mind Works. "As far as biological cause and effect are concerned, music is useless. . . music could vanish from our species and the rest of our lifestyle would be virtually unchanged. Music appears to be a pure pleasure technology." p 528

**Oliver Sacks**, 2007. Musicophilia, Tales of Music and the Brain. Sacks's classic about the place music occupies in the brain, and what happens when neurological impairments cause enjoyment of music to go awry;

2010. The Mind's Eye. First chapter is about Lillian Kallir, the pianist who lost the ability to understand musical notation (Musical Alexia)

#### **Video:**

Charles Limb, Your Brain on Improv (TEDx talk)

Vissarion Shebalin, Symphony No. 5, 1962 (Shebalin suffered from aphasia, but maintained music abilities.)

Recording of bird-bone flute from 40,000 years ago

Derek Paravicini Clip from 60 minutes (Musical savant with exceptional music abilities, but below average intelligence)

Alive Inside, documentary about the work of Dan Cohen with Alzheimer's patients and music. Music and Memory is the Foundation he created to put iPods with personalized playlists in the hands of Alzheimer's patients in nursing homes throughout the country. Read about it in A Musical gift that changes lives.

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