FSMTA 2022

88th Annual Conference Plenary Session Virtual: 28 January 2023

The Musical World of Infants

The presentation can be viewed on You Tube at the following link: <u>The Musical World of Infants</u>. The following resources relate to the presentation.

Music and Movement

Bob Yirka. Study shows brain processing similarities between music and movement. This is a short synopsis of the Sievers and Polansky article below that has found that the brain uses the same neural networks to process music and movement. That would explain why babies like to move to music.

Sievers, B., et. al. (2012). Music and movement share a dynamic structure that supports universal expressions of emotion. http://www.pnas.org/content/110/1/70

Reference list for articles discussed in presentation:

<u>Brandt, A.</u>, Gebrian, M., & Slevc, L. R. (2012). Music and early language acquisition. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2012.00327. If you have time to read only one article, read this one.

Corbeil, M., <u>Trehub, S.</u>, & <u>Peretz, I.</u> (2015). <u>Singing delays the onset of infant distress</u>. *Infancy*. DOI: 10.1111/infa.12114.

Curwen, Annie Jessy, 1898, <u>Music Teaching</u>, *The Parents' Review*, Vol. 9, no. 7. Wonderful article written by a piano teacher in 1898.

Gerry, D, Unrau, A, and <u>Trainor</u>, LJ (2012). <u>Active music classes in infancy enhance musical, communicative and social development</u>. *Developmental Science*, 15(3), 398-407

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

Hannon, E. E., & Trehub, S. E. (2005). <u>Metrical categories in infancy and adulthood</u>. *Psychological Science*, *16*, 48-55.

Koga, Midori. (2016). A Drink with Jam and Bread: developing musical understanding through solfege. *American Music Teacher*. April/May: 8-12.

Loewy, J., & Jaschke, A.C. (2020). <u>Mechanisms of timing, timbre, repertoire.</u> and <u>entrainment in neuroplasticity: Mutual interplay in neonatal development.</u> *Frontiers in Integrative Medicine*, 14(8).

Lordier, L., et.al. (2019). <u>Music in premature infants enhances high-level cognitive brain</u> <u>networks</u>. *Proceedings of the National academy of Sciences*, 116(4).

Partanen, E., Kujala, T., Tervaniemi, M., & Huotilainen, M. (2013). <u>Prenatal Music Exposure Induces Long-Term Neural Effects.</u> *PLoS ONE*, 8(10).

Phillips-Silver, J. & Trainor, L. J. (2005). <u>Feeling the beat: Movement influences infant rhythm perception</u>. *Science*, 308(5727), 1430.

Trehub, S. E. (2010). <u>In the beginning: A brief history of infant music perception</u>. *Musicae Scientiae*.

Trehub, S. E. (2001). <u>Musical predispositions in infancy</u>. *Annals of the New York Academy of Sciences*, 930, 1-16.

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

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

Books:

Steven Mithen. 2006. <u>The Singing Neanderthals: the origins of music, language, mind, and body.</u> Harvard

Lois Svard. 2023. <u>The Musical Brain: what students, teachers, and performers need to know.</u> Oxford. (Musical abilities of infants are discussed in Chapter 3.) If you are interested in ordering the book, <u>order here</u> with discount code AAFLYG6

Keynote:

Edwin Gordon. National Conference for Keyboard Pedagogy Keynote, 2015. Gordon believed all humans have a potential for music achievement, that we are born with varying degrees of aptitude for music and that we develop this aptitude through audiation, or the ability to "think in music." He was scheduled to be the keynote speaker at the National Conference for Keyboard Pedagogy in summer 2015. Ill health prevented him from being there, but his talk was read in his absence and is linked here. This link, unfortunately, is no longer available, but here is a link to another Gordon Keynote, this one also on his music learning theory. https://scholarcommons.sc.edu/gordon_articles/2/

Video:

11 month old twins dancing to dad's guitar

The video of the toddler who, in the presentation, was making it clear that she wanted the music to continue is no longer available on You Tube, but if you're interested in infants and toddlers moving to music, do a Google Videos search for "dancing babies." You will find about 6 million videos to watch.

Three-year old Kazuma playing Taiko

5-yr old Isaiah Chevrier playing djembe

<u>Isaiah Chevrier at 4 months.</u> If you watch Isaiah at 4 months, and then at 5 years old, you see the importance of parental or caregiver involvement in making music with an infant.

Website:

Brainvolts is the name of the website for the Auditory Neuroscience Lab at Northwestern University, directed by Nina Kraus. From the website:

Making music changes the brain, with tangible impact on listening, language, learning, social connection and cognition. Most research has focused on children taking private lessons. Through multiyear partnerships with inner-city schools and community programs, the Kraus Lab tells a new and promising story.

Everything on the site is fascinating, but as a start, click on the Music box on the home page. That takes you to two presentations, one on Music and the Brain, and the other on Rhythm in the Brain. Both presentations show that music has a significant impact on language and reading skills.

Please feel free to contact me via the Contact link at the top of the page or at svard@bucknell.edu