The Relationships Between Genre Preference, Aural Skills, and Tonal Working Memory

Elizabeth Monzingo,[1] Emily M. Elliott,[2] Daniel Shanahan,[3] David John Baker,[4] Juan Ventura,[5] and Katherine Vukovics[6]

[1,4,5,6] *School of Music, Louisiana State University, USA*
[2] *Department of Psychology, Louisiana State University, USA*
[3] *School of Music, Ohio State University, USA*

[1]emonzi1@lsu.edu, [2]eelliott@lsu.edu, [3]shanahan.37@osu.edu, [4]dbake29@lsu.edu, [5]kvukov1@lsu.edu

Musical training and cognitive abilities appear to be related to one another, but why? Recent research has used measures of musical sophistication to predict measures of working memory capacity, especially tonal working memory capacity, and vice versa, but definitive mediators of the relationship have yet to be identified. Musicians may have an advantage over non-musicians due to their likely enrollment in aural skills courses, in which they learn strategies for melodic dictation, a complex tonal working memory task. They may also have an advantage due to an accruement of aural skills implicitly learned through more meaningful engagement with music, or due to engagement with specific types of music. The aim of this paper is to investigate the role of explicitly and implicitly learned aural skills as potential mediators of the relationship between musicianship and working memory capacity. Results suggest that musicians are more likely to engage strategies that encourage deeper levels of processing for tonal working memory tasks than non-musicians and that musicianship and aural skills achievement help predict tonal working memory capacity. Exploratory analysis of genre preference suggests listening to classical music, jazz, or heavy metal correlates to higher tonal WMC, which encourages further research into genre preference. Considering these findings, we suggest that the "musician advantage" in working memory tasks may be found in the acquisition of valuable strategies for decreasing working memory load gained through the pursuit of musical mastery.