The Sound of Music within Academia: how people make sense of music

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PhD student Anja-Xiaoxing Cui wants to examine how people gain musical knowledge and how this knowledge can influence our perception of music. She is emotionally involved in her research area, as befits a truly artistic person with years of formal training: Anja has played the piano since age 5 and performed as a pianist. Along with that, Cui, working under the supervision of Dr. Lola L. Cuddy in the Department of Psychology, firmly believes in the academic capacity of the project. Fortunately, Anja has the opportunity to entirely immerse herself in the project in the next three years. Cui’s project has been granted the 2016 Vanier Canada Graduate Scholarship because of its significant research potential. “I am fortunate to conduct my research here at Queen’s,” says Anja, originally from Germany. “Canada provides excellent options for those who are interested in music psychology. It would be tough to combine these two spheres of my academic interests within German academia.”

“Would you like to listen to a short musical fragment I’ve created to conduct my research?” asks Anja and turns on the record. The music sounds unusual and a bit chaotic. “This is precisely what I need,” laughs Anja. “As a first step of my study, I am designing a brand new music system, which is unfamiliar to everyone. I will ask the participants of research experiments to step on the ground level, come in this music system and try to learn about it.”

It often happens that music is stuck in our heads and sounds familiar but we do not know why. Conversely, we can recognize that a sequence of chords in a song is unusual for the
genre, but we usually have no idea why. Anja explains that music genres can be identified by how often certain tones occur, i.e., by their statistical regularities.

In the experiments, participants will judge the fit of a tone in the melody from the unfamiliar music genre. Anja will compare the ratings before and after exposure to demonstrate how people acquire a sense of unfamiliar music and, consequently, gain musical knowledge. She is going to measure participants’ electrical brain activity via electroencephalography to define the nature of musical knowledge and how quickly it can be gained. As a result, the research will contribute to understanding the cognitive and neurological mechanisms people use to make sense of music.

Another part of Cui’s research includes exploration of the development of children who undergo formal music training in comparison with those who do not receive music lessons. Assessing the effects of music training on the children’s academic and social performance, Cui seeks to gain information that could help guide the best practice for music theory, educational strategies, and school policy.

Asked about her personal music taste, Anja mentions Bach, Ravel, and Chopin. Yet, the set of composers whose works she performs are much wider. In Kingston, Anja supports local charities by playing concerts as a pianist by donation with the Badass Brahms Chamber Collective. She co-founded the collective with other young local musicians. “Most of my co-players do not study music at school, but they are really good musicians,” says Anja. It proves again that music has profound impacts on us as a magical language everyone understands in their own way.

Read the original article on the School of Graduate Studies website