

Life
Sight and hearing meet in music study: Do musicians' visual antics affect our music appreciation?

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MONTREAL - Does the music sound better when Avril Lavigne tosses her hair or Yo-Yo Ma furrows his brow? Better ask a doctor.

Bradley Vines, who recently completed his PhD in psychology at McGill University, has been awarded a \$40,000 US grant from the Grammy Foundation to conduct post-doctoral research at Harvard University, where he'll use functional magnetic resonance imaging (fMRI) to track what goes on inside the listener's brain when Shania Twain warbles and swings her hips.

Scientist and musician -- he has played the saxophone since he was 10 and moonlights in a Latino jazz band -- Vines, 27, has long been curious to know whether going to a concert or watching MTV heightens or detracts from the music experience.

"I've always been intrigued by the scientific aspect of musical performance - the perception of emotion, movement and the interpersonal relationship between musician and the audience," said Vines, whose research at McGill focused on the visual impact of a musical performance.

To find out, Vines used questionnaires and sliding scales to measure how study subjects reacted while watching a solo musician perform a work by Igor Stravinsky, an early 20th-century composer noted for his irregular melodies.

"We didn't want music that had toe-tapping beat, in case that caused a rhythmic pattern of movement that made it too stylized, predetermined," said **Daniel Levitin**, Vines's doctoral supervisor at McGill and a leading expert in music psychology. "We were looking for visual elements that reflected emotional expression, not time-keeping.

Seeing a musician strain over a difficult passage can be fun, but Vines found that watching music performed doesn't automatically mean you'll enjoy it more.

"Some flamboyant behaviour can detract from pleasure in the music," he said.

Using an fMRI, Vines hopes to map how different parts of the brain respond to visual, aural and emotional stimuli, beginning with very simple keyboard and drum beats that strike a universal chord.

Such research may sound arcane, but Levitin sees practical applications. He said expanding our grasp of how vision and hearing interact inside our heads will eventually help doctors understand the brain and treat patients who have suffered strokes, tumours or Alzheimer's disease.

He's not alone. This year, the Grammy Foundation awarded 19 grants for academic projects and music preservation.

"This research will lead us farther down the road of defining the importance of music in education and its ability to enhance various therapies, as well as to manage the occupational challenges of music professionals," said foundation president Neil Portnow.

McGill now boasts the largest team of researchers in the world devoted to the science of music, with 20 full-time professors in engineering, music, neuroscience, medicine, science and psychology attached to its \$50-million Centre for Interdisciplinary Research in Music Media and Technology.

Colour Photo: Associated Press, File / Yo Yo Ma, right, and Philadelphia Orchestra Music Director Wolfgang Sawallisch at Carnegie Hall

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