

# Music and Imagination: The Rhythmic Brain

Colicky babies have been known to stop crying when a parent turns on a dustbuster or, alternatively, places them on a washing machine during spin cycle. Some dairies make a point of playing Mozart sonatas when cows are being milked because it is thought to make the animals feel contented, and thus more productive. Sprinters can increase their rate of movement to 5-7 steps per second, but these results can only be achieved by systematically applying music to their training regimen. For this reason, the use of ipods has been banned in most marathons because music can act as a kind of performance-enhancing drug. Most significantly, children with developmental problems and patients suffering from Alzheimer's, Parkinson's, and Tourette's achieve improvement in affect and self-expression when they are exposed to exercises that incorporate rhythmic movement in response to music.

**Eric Barnhill**, a Juilliard-trained pianist whose interest in music therapy stems from his own life experiences with Tourette's syndrome, spoke about the therapeutic power of combining music and movement at the most recent session of the Center's ongoing music series. **Stephanie Chase**, violinist and Artistic Director of the Music of the Spheres Society, hosted the January 14 event, entitled *Music and Imagination: The Rhythmic Brain*. Mr. Barnhill began by introducing his Cognitive Eurhythmics therapy method, which he developed specifically to enhance attention, coordination, and self-expression in children with developmental disorders. His approach stems from alternative movement practices like the Alexander Technique, the Feldenkreis Method, and Tai Chi, all of which are frequently taught at graduate programs in music and performance. But the roots of his system rest primarily in an approach known as Eurhythmics, which was developed by the Swiss music teacher Emil Jacques Dalcroze. The distinguishing feature of the Dalcroze approach, and of Mr. Barnhill's work with children, is the combination of movement exercises with elements of music and rhythm.

Mr. Barnhill went on to explain that his technique allows him to perceive that an infant who appears to lack motor control is simply unable to organize itself rhythmically. He added that music and rhythm, experienced through the gateway of movement, impact psychological processes, which in turn impact the structure of the brain.

Barnhill cited a hypothesis put forth by the neuroscientist Francis Krick, who believed that the structures in the brain responsible for perception oscillate at 40Hz per second, and this rhythm unifies the various planes of perception, such as vision, hearing, and even touch. While Barnhill conceded that some of the theorists whose ideas constitute his method might be considered "outliers" in their respective fields, he believed that taken collectively they validated the premise that rhythmic patterns are a fundamental component of perception. He introduced the concept of prosody, which is the rhythm, stress, and intonation of speech, highlighting its importance in understanding our ability to process speech. "When we are listening for meaning, we need prosody," he asserted. "Without it we can barely get through a standard English sentence."

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Ms. Chase shifted the emphasis of the discussion by asking how Barnhill's techniques might be used with adults who want to enhance their coordination, especially in relation to musical performance. She referenced her own struggle to learn a highly complex Stravinsky suite. Barnhill insisted that there was no distinction, in terms of the methods used to achieve growth, between the organizational challenge of a child trying to catch a ball and someone trying to play a sophisticated piece of music. A member of the audience took exception with this premise, pointing out that performers approach their work from a background of confidence and competence, whereas a child with learning difficulties has no sense of being able to connect to his or her own body, or act as an agent for change. "There's something deceptive about fluency of any kind," Barnhill responded, explaining that when we see skilled activity, we assume that it comes easily to the performer, when in fact the process of gaining mastery is very similar—though admittedly more sophisticated—to the process of a child learning a relatively simple task. Bouncing a rubber ball in rhythmic patterns, Barnhill illustrated how rudimentary counting exercises that challenge children with cognitive disabilities can quickly accelerate into complex rhythmic puzzles that force adults to rearrange their normal patterns of perception. *A.L.*

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## New Poets/New Poetics (continued)

builds in me/ only after struggle builds around me,/ a mythical ether challenging this horn/ with its song stuck in its throat: memory,/ the present moment and all the notes falling/ between them, struggling to get out."

For all three of the poets, music is a prominent influence, particularly for Rosal, whose style of performance exudes the energy and emotion of song. Rosal comes from a family filled with musicians, and before he began writing poems in his mid-20s, he was a street dancer. "My dad didn't want us to become musicians because we wouldn't earn any money, so I became a poet," he joked. Rosal observed that "there's a shared joy, but also a private relationship" in music. This quality came across especially when Rosal sang in Spanish as an introduction to one of his poems. He went on to chant verse from another poem that was written in a Philippino dialect. Rosal presented poems from his two books, *My American Kundiman* and *Up-rock Headspin Scramble and Dive*, capturing a spirit of outrage in "About the White Boys who Drove By a Second Time to Throw a Bucket of

Water on Me," and unabashed joy in "The Woman You Love Cuts Apples for You."

Each poet discussed how other poets influenced their work and inspired them to pursue writing. When Jordan heard the black poet Cornelius Eady read, the familiar experiences Eady describes in his poems brought Jordan to tears. "It was the first time I'd ever been moved by art," he said. For Calvocoressi, seeing Seamus Heaney read in high school was pivotal, as was discovering the darker side of Robert Frost. When she was assigned Frost in school, she didn't like him, but perversely, she decided to "read him book by book to show how terrible he was." By the time she got to *North of Boston*, she couldn't believe how good he was. The way people in Frost's poems encounter the terrors of nature and their darkest selves became a source of inspiration. For Rosal, a story about Pablo Neruda served as a testament to the music of poetry. Neruda once recited a poem for an audience full of people in Chile and forgot the words in the middle. "Everyone in the audience finished it," Rosal said. "That's the kind of poem I want to write." *P.R.*