Science Shows How Drummers' Brains Are Actually Different From Everybody Elses'

By Jordan Taylor Sloan May 14, 2014

Science Shows How Drummers' Brains Are Actually Different From Everybody Elses'Image Credit: AP

In the music world, drummers always bear the brunt of the joke. Most have the same punchline:Drummers are idiots. Take, for example, the following: "How do you tell if the stage is level? The drummer is drooling from both sides of his mouth."

Whether it's being ruthlessly mocked for their idiocy, repeatedly killed in *This Is Spinal Tap* or just lusted after less often than the lead guitarist, drummers walk a tough road. But it turns out science shows drummers have an advantage over everyone else. According to research, drummers have a rare, innate ability to problem-solve and change those around them.

For starters, rock steady drummers can actually be smarter than their less rhythmically-focused bandmates. A study from the Karolinska Institutet in Stockholm found a link between intelligence, good timing and the part of the brain used for problem-solving. Researchers had drummers play a variety of different beats and then tasked them with a simple 60-problem intelligence test. The drummers who scored the highest were also better able to keep a steady beat. At last, hard proof that John Bonham really was a genius.

But even though a steady drummer may be more intelligent than his or her bandmates, the drummer's gifts can be shared: a tight beat can actually transfer that natural intelligence to others. In studies on the effects of rhythm on brains, researchers showed that experiencing a steady rhythm actually improves cognitive function. One psychology professor at the University of Washington used rhythmic light and sound therapy on his students and discovered that their grades improved. Similarly, one researcher at the University of Texas Medical Branch used that method on a group of elementary and middle school boys with ADD. The therapies had a similar effect to Ritalin, eventually making lasting increases to the boys' IQ scores.

Granted, these studies focused more on the effects of rhythm on the mind rather than on the mind behind the rhythm. Still, drummers' consistent rhythmic focus has positive effects on them and those around them. When drummers bring a steady rhythm (and their corresponding problem-solving

abilities) to a group setting, they actually create a "drummer's high" for everyone around them. University of Oxford researchers discovered that when drummers play together, both their happiness levels and pain tolerance increase, similar to Olympic runners. Observing that high led researchers to hypothesize that drumming was integral to community-building and that sharing rhythms could be the sort of behavior necessary for the evolution of human society.

Drumming is a fundamentally human thing. A lot of modern music has shifted towards drum machines over humans to create ultra-precise electronic rhythms. But it turns out that what we typically perceive as error is really just a uniquely human sense of time: Researchers at Harvard found that drummers harness a different sort of internal clock that moves in waves, rather than linearly as a real clock does. They match an innate rhythm that has been found in human brainwaves, heart rates during sleep and even the auditory nerve firings in cats. When a human drummer plays, he or she finds a human rhythm.

So the stereotypes about drummers aren't just baseless, they're also plain wrong. Drummers are people tapped into a fundamental undercurrent of what it means to be human, people around whom bands and communities form.

And admit it, sometimes they even write great songs.

Editor's Note: Feb. 25, 2015

The first paragraph of this article has been updated since it was originally published. Some of the videos that appeared in an earlier version of this story have been removed.

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