

June 27, 2014

HUFF
POST

The Third Metric

Redefining Success Beyond Money & Power



Rebecca Adams

Rebecca.Adams@huffingtonpost.com

Here's Proof Music Can Do More Than Just Make You Feel Good

Posted: 06/24/2014 8:09 am EDT | Updated: 06/24/2014 8:59 am EDT

Friedrich Nietzsche once remarked, "Without music, life would be a mistake." Perhaps this is why, as [Daniel J. Levitin](#) points out in his book *This Is Your Brain On Music*, every recorded human culture has included music in some form.

If music is a universal language, then we're born fluent speakers. When we hear a song, our brain springs into action, as the music fires up our emotional, memory and motor centers. It's no wonder music has been linked to creative individuals since (practically) the beginning of time.

But does simply *listening* to music make you more creative? We spoke to Levitin, a professor of neuroscience at McGill University, and [Glenn Schellenberg](#), a professor of psychology at the University of Toronto, to find out the answer.

Don't count on Mozart to instantly make you more intelligent and creative.

"I think the whole Mozart Effect story is dead," said Schellenberg. "It's a done deal now."

If you're not familiar, the term "Mozart Effect" was [coined by researchers in 1993](#) after they studied how listening to Mozart's "Sonata for Two Pianos in D Major" (K.448) could affect the listener's spatial reasoning. It turned out that subjects performed much better on tests after hearing the piece of music compared to when they were sitting in silence. While the researchers noted that this effect was temporary and didn't extend beyond the test's 15-minute period, the public narrative became: If you could listen to Mozart for 20 minutes a day, it would raise your IQ. If only.

Unfortunately, [the theory has been debunked](#). It's not Mozart that makes you more apt to solve visual problems -- *any* music you like can have this effect. The experiment has since been replicated using a wide range of different recordings. Each time, those who preferred a type of music -- whether it's classical, pop or jazz -- performed better on cognitive tests after hearing that type. The tempo of a given song, as well as its major or minor tonality, also had an effect on how happy and alert listeners felt (what researchers call "arousal"), which in turn influenced their performance.

In 1999, Schellenberg conducted the same test as the 1993 researchers did, but this time he used a piece by Franz Schubert that was on the same CD and performed by the same pianist as the Mozart piece from the original experiment. And what do you know? [He found a "Schubert Effect."](#) But Schellenberg didn't stop there. He performed the experiment again, this time having test subjects listen to the audiobook of a Stephen King novel.

"When we compared performance on the cognitive tests after listening to music with the performance after listening to a narrated story - which is a better control, because it's an auditory stimulus which changes over time and should be about as interesting -- the effect disappears," he said. "The people who liked Mozart better do better after Mozart, and the people who liked the story better do better on the cognitive test after the story."

Obviously, it's tricky to measure how a song can lead to increased creativity, but it's clear that music can inspire higher brain functioning -- provided you like the particular piece of music playing, that is. As long as music can get you in a positive mood and increase your arousal levels, you just might reap immediate cognitive benefits.

Does Mozart do it for you? (It's worth a try!)



Music is one of the greatest ways to enter "mind-wandering mode," which can unlock creativity.

Levitin explained that the field of neuroscience has identified two primary modes of brain operation: Either you're paying attention to something very closely and you're deeply engaged in a task, or you're in "mind-wandering mode," which involves daydreaming and flitting from thought to thought. As Levitin put it, "It's a flood of different thoughts that feel unconnected and loose."

It's in this mode where almost all of our creativity happens, and where we're able to come up with innovative solutions to problems.

"You've probably had the experience that you had some problem you were trying to solve, either a work problem or a very practical problem," Levitin told HuffPost. "You think about it for a while and you really direct your energy to think about it, and you come up with nothing. Then later in the afternoon, you've gone to walk the dogs or you're grocery shopping -- you're not even thinking about it -- and boom: The answer pops into your mind."

Mind-wandering mode, which was discovered by [neurologist Marcus Raichle](#) at Washington University in 2001, is the default mode of the brain. In other words, it's the state the brain enters into most easily -- which is why focusing on a task can be so mentally exhausting, or "metabolically expensive," as Levitin put it.

On the other hand, you can stay in mind-wandering mode for a long time and still feel recharged and inspired to come up with imaginative ideas. You get into this mode by relaxing, letting go of the problem or task at hand, and *voila* -- creativity ensues. Or at least that's the idea. So what does this have to do with music?

"Music is one of the most exquisitely effective ways of allowing you to enter the mind-wandering mode," said Levitin, who devotes a chapter of his forthcoming book, [The Organized Mind](#), to this precise topic.

In 2011, [Finnish researchers](#) found that when our brains process the timbre of a song, our default-mode network (associated with mind-wandering mode) is activated, inspiring creativity. Such mental rewards don't only apply to those in the arts: Even [computer programmers](#) have been shown to benefit from the positive, relaxing mood that music can induce.

Whether you realize it or not, you're probably already [using music for mood regulation](#). The song you play when you wake up in the morning is likely quite different from the song you put on after a breakup. Taking the time to relax to your favorite music can not only complement your mood, but it can also unlock any mental barriers to your imagination.

"The 'right' music -- meaning, the right music for you at a particular point in time, because it's subjective and idiosyncratic -- pushes you into this mind-wandering state," said Levitin. "You relax and you let your thoughts flow from one to another, and that's how you get into creativity."

When it comes to background music, volume is key...

Most of us don't simply listen to music to relax or prepare for a task. Rather, we listen to music *while* studying or working.

In 2012, Schellenberg conducted a study on background music and concluded that it seemed to have no effect on cognitive function, unless it was too loud or too fast and therefore distracting. Another 2012 study by different researchers found that exposure to a moderate level of ambient noise -- say around 70 decibels -- [enhances abstract thinking and performance on creative tasks](#), compared to low (50 dB) and high (85 dB) levels of noise. (According to the American Tinnitus Association, 70 dB is [about as loud as a washing machine](#), while 50 dB is comparable to rainfall and 85 dB is about the noise equivalent of "average traffic.")

...and so is the tempo.

In 2013, the music-streaming service Spotify commissioned research on the benefits of studying with background music. Lead

researcher Emma Gray, a clinical psychologist at the British CBT & Counseling Service, [found that it was important to choose the "right" music](#) -- in this case upbeat music with 50-80 beats per minute. This can include classical pieces, like Beethoven's "[Für Elise](#)," and contemporary pop like Miley Cyrus' "[We Can't Stop](#)" or Justin Timberlake's "[Mirrors](#)." Once again, this is intended to boost arousal.

While we take these findings with a grain of salt, we'd also guess that if you listen to an upbeat song you like, it probably won't *hurt* your creativity. And who knows? It might just work for you.

Here's one of the playlists Gray created to enhance creativity while studying science, humanities and languages:

Bottom line: Listen to music that you like if you want to tap into your creativity.

Both Schellenberg and Levitin agree that music will have different effects on your brain and behavior depend on how it makes you feel. Want to be alert and focused? Try an upbeat song that puts you in a good mood, whether it's Mozart or Miley. Want to step away from a problem and relax in order to find a solution? Play *anything* you like -- and don't dismiss those sad songs you like to mope around to.

"When we hear sad music, it allows us to empathize with the composer and the musician and makes us feel connected to them," said Levitin. This empathy, he said, can allow individuals to glean creative insights they wouldn't otherwise have.

But don't take our word for it. Go forth, make a playlist and listen to your creative heart's content. At the very least, you'll have Nietzsche's approval.