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## Mozart, Madonna and the mind: the magic of music explained

[TEDDY JAMIESON](#)

October 15 2007

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So, what do you know about music? I mean, what do you really know? Apart from the obvious - that Simon Cowell and Louis Walsh don't appear to have a clue what it is, that there is simply no excuse for Elton John, and that you can't beat a bit of Bach. Come on, everyone knows that stuff. No, I'm talking about the real questions. What is music anyway? Where did it come from? What's it for? What's better for you, Beethoven or Britney? Why would anyone listen to Westlife?

OK, that last one is unanswerable, but Daniel Levitin might be able to enlighten us about the rest. In his time he's been a session musician, a sound engineer and a record producer. Oh, and these days he's a professor in neuroscience at McGill University in Montreal, where he runs the Laboratory for Music Perception, Cognition and Expertise. And he's just written a book entitled This Is Your Brain on Music: The Science of a Human Obsession.

But you probably don't have time to read a whole book - there's the new Radiohead album to download, after all - so let's make it easy for you. Here are 10 things Daniel Levitin knows about music.

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### 1) What is music?

"Music is, I think, anything that somebody intends to be music. It's organised sound. Generally speaking, it's sound organised in a way that there are different pitches and different rhythms and different timbres. That's not always true, but it's almost always true. African drum music has different pitches because the drums are pitched differently. Orchestral music has less rhythm than James Brown, but there's still a lot of rhythm there."

### 2) When we listen, we don't all hear the same thing

"Everybody hears something different. But that's not so surprising - everybody who sits down and eats a meal is tasting something slightly different. The interesting thing is there are points in common and points that are different and we'll never really know. This is what is called the problem of other minds. You can never know what another person is experiencing."

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### 3) Of course, it's all a matter of taste

"I think we all know somebody who only wants to eat at the same restaurant he always eats at, and wants to order the same meal he always gets. Then there are other people who want to try something new - and, of course, that manifests itself in music, too. That's why one man's Mozart is another man's Madonna, or one man's Liszt is another man's Ludacris. It's partly based on your own listening experience, but there are personality factors as well."

### 4) Classical music is no better than pop

"First of all, in terms of what is going on in the brain, the more important thing isn't what genre the music comes from but whether you like it or not. If you like it and you're engaged with it, it's going to activate the same intellectual centres as another genre does for someone else. So if you're really into pop or you're really into hip-hop, your brain is going to be tracking the form and the structure of it in the frontal lobes and trying to figure out what's coming next. It's going to be as engaging as a Mozart symphony."

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what's coming next; it's going to be as engaging as a manier symphony.

"The subtext to the question is: will listening to classical music make me smarter? And there's no evidence of that at all. But listening to music in general can have a number of cognitive benefits. You get more benefits if you play an instrument than if you just listen, especially if you learn to play an instrument early, like at seven or eight years old. The early evidence from research is that kids who learn to play an instrument learn to read faster and learn to do a number of school tests better. But even listening can engage your mind in the same way that crossword puzzles do. It can help stimulate the brain and eventually stave off Alzheimer's."

**5) You want to be the best? Practise, practise, practise**

"Everybody whom we've studied or talked to or know of who is a world-class expert at anything, whether it's playing chess or athletics or being a musician well, all the world experts have put in 10,000 hours. But that doesn't mean everybody who puts in 10,000 hours becomes an expert."

**6) What does Prince Charles know, anyway?**

"There is no scientific evidence that playing music to your plants makes a difference. First of all, plants don't have ears or anything like ears. And playing music to animals? Oh, jeez. There's no evidence that animals hear any of the things we hear when we play them music. Mice and rats have a different range of hearing from us. They don't hear anything below 3000 hertz so they're not going to hear any instruments below the trumpet."

**7) Don't believe what you see on The Flintstones**

"One of the arguments is that music is an evolutionary accident; that it's piggybacking on language. We developed language and music sort of came along for free. Another argument is that music actually preceded language. This is the argument of Steven Mithen, who wrote a book called The Singing Neanderthals. He reviews evidence that the Neanderthals had something like music and it came before language. It was an early form of communication - an emotional communication.

"When we're talking about music 50,000 years ago, we're not just talking about music, were talking about music and dance because they were one and the same. And they were participatory. It wasn't a couple of people standing on a makeshift stage made out of bedrock holding up a branch to look like a microphone. No: it was everybody participating and dancing and singing at the same time. There's an argument that this kind of synchronised movement and vocalising created very important social bonds, the kind that allowed for civilisation and society to form."

**8) When it comes down to it, it's all about sex**

"Charles Darwin's argument was that music, in our history, signalled sexual fitness, plus cognitive, intellectual and physical flexibility. The member of our species who could sing and dance for hours on end was indicating his sexual fitness."

**9) Joni Mitchell is not the same as you and me**

"I was talking to Joni Mitchell not so long ago. I don't remember the context, but I was going through some stressful experience and I was saying I was trying to manage the stress and keep my emotions under control so I could be on an even keel and get on with my life. And she said, You were trying to keep your emotions under control? Why the hell would you want to do that? It was like the most foreign concept to her.

"What I realised was that what Joni does and what Bono does and what any great singer does is take you in the space of one note from a whisper to a scream. They have to traverse this vast emotional landscape in order to communicate to you something that is going to be moving, and I think to do that they have to wear their emotions on their sleeves. This can be a reason why being around true musicians, especially vocalists, can be an emotional rollercoaster."

**10) Academics can be cool, too**

"I tend to hang out with scientists who are also artists. I don't know if I have an unbiased sample. I play in a band: we call ourselves Diminished Faculties. We're all science professors, and I think my bandmates have good taste.

"I love the Cure, I love Chopin and Debussy, I love Miles Davies. I like the last Nas album. I'm sort of all over the place - in the sixties in Berkeley I was totally into Led Zeppelin and the Who, the Beatles, the Stones, Hendrix and Janis Joplin. I don't like J.Lo. And I don't like Wagner, because of the associations."

- This Is Your Brain on Music (Atlantic Books, £17.99) is out now.

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Posted by: Donald McMiken on 11:03pm Sun 14 Oct 07

This is an interesting review of an interesting proposition: that patterned sound, music, reflects and effects our emotions. I also noticed that if you substitute patterned language for "music" in its reading you also have its analogue for writing and literature. The review has induced me to buy and read this book.  
Cheers, Don

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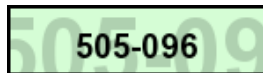
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