

WHAT BLAG?

BY CHRIS MARTUCCI

Why Fingernails on a Chalkboard Sound So Horrible →

Duncan Geere:

A powerful psychological component was identified. If the listeners knew that the sound was fingernails on the chalkboard, they rated it as more unpleasant than if they were told it was from a musical composition. Even when they thought it was from music, however, their skin conductivity still changed consistently, suggesting that the physical part of the response remained.

That physical response is likely generated by the shape of the human ear canal, which prior research has shown to amplify frequencies in the range of 2,000 to 4,000Hz. What seems to happen, the researchers reckon, is that when a screech on a chalkboard is generated, the sound is amplified within our ears to painful effect.

Interesting, but I reckon more research needs to be conducted surrounding this “psychological component.” The physical response cannot be explained merely by the amplification of noise — other extremely loud noises don’t seem to bother us in the same way. There’s something distinctive about nails on a chalkboard.

Just reading the words “fingernails on a chalkboard” raises your heart rate. You can feel the response in your chest. You clench your teeth, tighten your fists (mirror neurons at work). But why? And why is it “more unpleasant” when you know the sound is fingernails as opposed to a musical instrument?

I imagine that, as with most unpleasant psychological reactions, our aversion is rooted in some biological advantage. For instance, our fear of bugs, especially cockroaches, stems from the fact that cockroaches are dirty — they come into contact with feces — and so we avoid them. The sound of nails on a chalkboard may resemble a sort of rough, dry scraping that could damage your teeth and nails. That’s purely speculative; As I said, more research needs to be conducted, but we cannot fully understand the physiological response without asking the question, “Why?”



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