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# Blame it on the frequency, why we hate fingernails on blackboards

posted by [John Lampard](#) on Thursday, 3 November, 2011 at 9:57 am

The shape of our ear canals play a large part in making the sound of fingernails being scratched over a blackboard [as grating and unbearable as it is](#).

As they will report next week at the Acoustical Society of America conference in San Diego, California, Oehler and Reuter found that a listener's skin conductivity changed significantly when the person heard a sound he or she later reported as unpleasant, showing that disturbing sounds do cause a measurable physical reaction. More surprisingly, they found that the frequencies responsible for making a sound unpleasant were commonly found in human speech, which ranges from 150 to 7000 hertz (Hz). The offending frequencies were in the range of 2000 to 4000 Hz. Removing those made the sounds much easier to listen to. Deleting the tonal parts of the sound entirely also made listeners perceive the sound as more pleasant, whereas removing other frequencies or the noisy, scraping parts of the sound made little difference.

Tags: [blackboards](#), [fingernails](#), [noise](#)

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## The Australian Art Show List

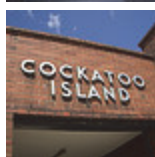
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# AUSTRALIAN ARTSHOWLIST

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[The Australian Art Show List](#), a list of art shows and exhibitions in Australia.

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