

Do you have composer genes?

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Musical creativity is at least partly inheritable according to a new study.

Arguments about musical talent can get pretty vicious and jazzed up. One issue is whether people have talent, but given that they do, how did they get such skills?

Some have argued fervently that musical talent is genetic while others claim that it is primarily something acquired through hard work and perseverance – that practice makes perfect.

In the 1990s the researcher Anders Ericsson concluded that years and years of practice – not natural talent – was the main input behind musical expertise.

Equal without practicing

In 2014 another Swedish study published in *Psychological Science* pointed in the opposite direction. Researcher Miriam Mosing found twins that had gone separate ways – one had spent a lot of time practicing on instruments or singing, whereas the other one had not.

Then she tested how astute each of the twins was at perceiving various notes, melodies and rhythms. These are tasks which musicians excel at. But the ones who had not spent time arduously training their vocal chords or mastering instruments proved to be equally good as their musically experienced twins. This suggested a strong genetic contribution to musical talent.

A team of Finnish researchers have now looked at the issue from another angle.

What about the musical creativity needed to compose or adapt music? Can that be linked to genes?

Chromosome sites

Jaana Oikkonen at the University of Helsinki and her colleagues studied nearly 600 persons who had abundant musical experience.

The participants responded to a questionnaire which included a query into whether they personally had composed or arranged music, or whether they were involved in creative activities unrelated to music.

The researchers then compared the answers to analyses of the participants' individual genomes.

The results showed that special genes appear to correspond to the various talents. The researchers did not isolate individual talent genes, but they did find special areas of the chromosomes.

Composing seemed to be linked to genes in a certain part of chromosome four, whereas arranging music was connected to a site on chromosome 16.

Surprisingly, there were no evident genes linked to neither composing nor arranging music.

Uncertainties

So it seems that genes are part of the medley in explaining various aptitudes among musicians.

There is still much that the study fails to determine.

One problem is that it is based on a questionnaire and thus self-reporting. The researchers conducted no objective assessments of the test persons' levels of creativity or the quality of their outputs. This leaves room for error, as the participants could give wrong answers about how much they compose or arrange music, either intentionally or because they interpreted the questions differently.

At the risk of stretching this incertitude, one could say that the researchers found the genes responsible for wanting to be a composer, rather than for actually being one.

Nevertheless, the results could give a hint as to whether hard work alone is all that is really needed to become a musical composer or a conductor.

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 [New research shows that the ability to compose or arrange music is partially controlled by our genes. \(Photo: PrinceOfLove /Shutterstock/NTB scanpix\)](#) [7]

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[Jaana Oikkonen et al., Creative Activities in Music ? A Genome-Wide Linkage Analysis, Plos One, February 2016.](#) [13]

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