

How many of the people born in the world in 1756 could have become Mozart? IQ twin studies may provide an answer

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That question, ever popular in the long running debate over the roots of IQ, sparks at least two others: How many people would have Mozart's innate musical ability and drive? What educational opportunities or other life circumstances would be necessary to provide an opportunity to transform that raw intelligence into musical genius?

In other words, how much of IQ is 'nature' and how much is 'nurture.' A [study](#) published last week on PLOS ONE tracked twins to further explore that question. The authors' conclusion? Genes matters much more. "[I]ndividual differences in educational achievement at the end of compulsory education are not primarily an index of the quality of teachers or schools," the researchers wrote. "[M]uch more of the variance of [test] scores can be attributed to genetics than to school or family environment.. on the heritability of intelligence has renewed the century-long debate over this ever politically incorrect issue, and has come up with some provocative new twists.

The evidence from twin studies, adoption studies and [even from DNA evidence is relentlessly consistent](#): in children, in Western society, the heritability of IQ scores is about 50 per cent. The other half comes equally from family (shared environment) and from unshared individual experiences: luck, teachers, friends.

The second surprise is that genetic influence [increases with age](#). If you measure the correlation between the IQs of identical twins and compare it with that of adopted siblings, you find the difference grows dramatically as they get older.

[T]he third surprise — that much of what we call the "environment" proves to be itself under genetic influence.

9A] final paradox: a world with perfect social mobility would show very high heritability. ... We are a long way from equality of opportunity, but when we get there we will not find equality of outcome. Already IQ — for all its flaws as an objective measure of intelligence — is good at predicting not just educational attainment, but income, health and even longevity remarkably well.

Read the full, original story: [Heritable IQ is a sign of social mobility](#)

Additional Resources:

- [Literal gene-ius: The search for a genetic basis of intelligence](#), Wired
- [Smart genes: Nature more than nurture determines exam success](#), New Scientist
- [Project Einstein: Are there genes for mathematical genius?](#) Nature