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Mozart's piano music the key to higher IQ?

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Can it be that the music of Mozart is not only exalting but can also improve intelligence?

An experiment on students at the University of California at Irvine suggests that listening to 10 minutes of Mozart's piano music significantly improves performance in intelligence tests taken immediately afterward.

The finding was reported this week in the British scientific journal *Nature*.

The university researchers found that after students listened to Mozart's *Sonata for Two Pianos in D Major (K. 448)*, as performed by Murray Perahia and Radu Lupu, their test scores were a mean of eight or nine points higher than the scores the same students achieved after listening to a recorded message suggesting they imagine themselves relaxing in a peaceful garden or to silence.

The effect was only temporary, however.

One of the researchers, Dr. Frances H. Rauscher, said in an interview that all the students were asked about their tastes in music, and that although some liked Mozart and some did not, their test scores generally improved after the music session, with no measurable differences attributable to varied tastes.

The pulse rates of the subjects did not change under any of the test conditions, so physiological arousal was not a factor in the test scores, she said.

The researchers picked Mozart, Rauscher said, because of the complex, highly structured and non-repetitive character of his music.

"Listening to such music may stimulate neural pathways important to cognition," she

said, adding, "Incidentally, Mozart himself often scribbled numbers and mathematical expressions on his manuscript scores."

Thirty-six students, half of them men and half of them women, took part in the experiment. After each listening period they were given standard nonverbal IQ tests of spatial reasoning, involving questions about the geometry of paper objects shown as they would look after being folded or cut.

Rauscher said researchers in her group intended to test the effects of other kinds of music, like rock and the minimalist music of the contemporary composer Phillip Glass, for example.

They also plan to test preschool children and subjects with and without musical training.

Does the group expect controversy?

REFERENCE: Rauscher, F.H., Shaw, G.L. and K.N. Ky: Music and spatial task performance. *Nature* **365**(#6447): 611 (1993). [DC Library call number: PER Q1.N2]

The article EM9340 reprinted above is used in Chapter 10 of the STAT 231 Course Materials.