CultureCase

Your brain on music

This research was conducted by **Ping Huang, Hanhua Huang, Qiuling Luo**, and **Lei Mo** at **South China Normal University**

Summary

Philosophers and scientists have long been trying to understand what happens in our heads when we listen to music. This study took a group of 18 volunteers in China and put each of them inside a brain scanner while playing them two types of music: ‘artistic’ and ‘popular’ (while also playing ‘musical notes and singing’ to form a ‘control’ experience). The results reveal that artistic and popular music stimulate different parts of the brain. Popular music generates primary rewards, which are physiological rather than intellectual. Artistic music is more associated with reward systems which are more intellectual in nature and relate to parts of the brain involved in theory of mind tasks like empathy.

The researchers gave their subjects specific instructions while they were being scanned

They played them a sequence of short music clips (these included the ‘artistic’ and the ‘popular’ as well as a sequence of notes and singing that was designed to help calibrate the results). Opera was used for the ‘artistic’ music and love songs were used for the ‘popular’ music. Each of the participants in the study was asked to close their eyes during the experiment and after each music clip to rate how familiar it felt and how beautiful they thought it was.

Artistic music was more demanding, rather than more beautiful

The research subjects didn’t reveal any major differences in their beauty ratings for the artistic and the popular music, so the different brain activity revealed by the scans can’t be ascribed to purely aesthetic variation. Therefore, the researchers conclude, it was the more intellectual tasks that the brain

undertook to appreciate the ‘artistic’ music that explains the observed neurological responses.

Keywords

China **experiment** **music** **empathy** **brain**

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