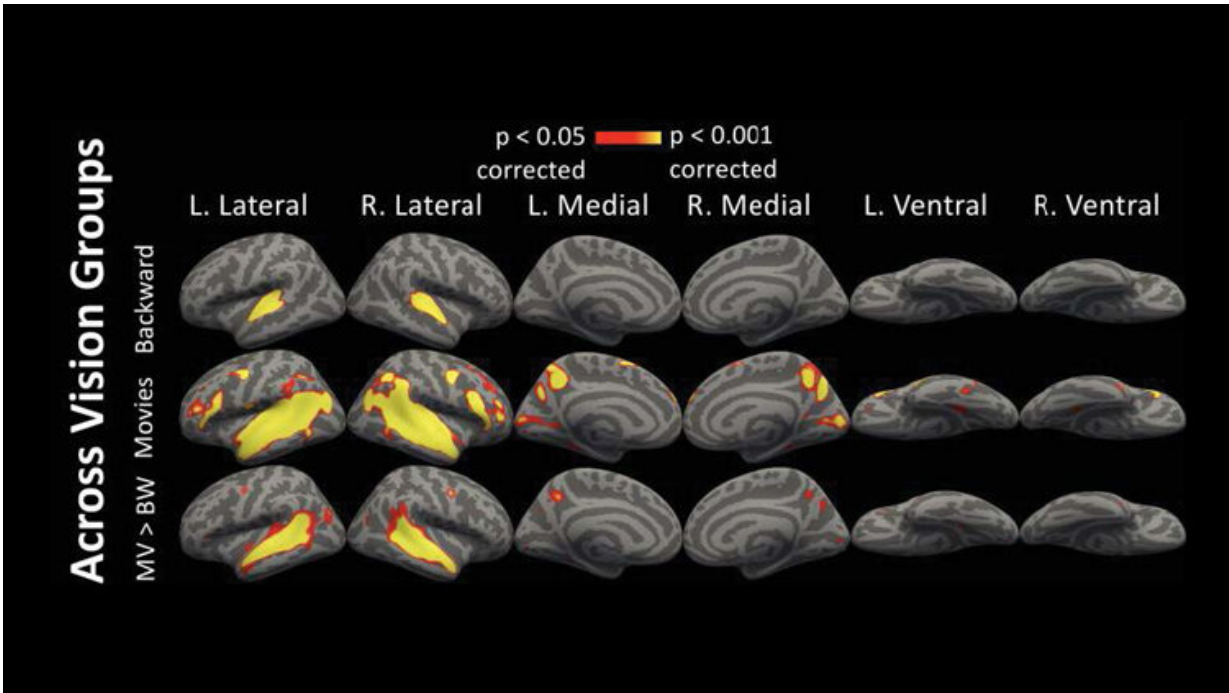


How the brain repurposes unused regions

September 23 2019



Naturalistic auditory stories synchronize "visual" cortices across congenitally blind but not sighted individuals. Credit: Loiotile et al., *JNeurosci* (2019)

In adults that are born blind, the "visual" cortex is activated in a similar way during a listening task, according to new research in *JNeurosci*. The results answer questions about how development can override anatomy to influence brain function.

Previous research observed that the "visual" cortex in [blind people](#) is

recruited for other functions, but it was not known if the new purpose was consistent or varied from person to person.

Loiotile et al. used [functional magnetic resonance](#) imaging to compare how the auditory and visual cortices of the brain were activated in blind and blindfolded, sighted participants while listening to audio clips from movies.

Sixty-five percent of the regions in the visual cortex had similar activation among the blind participants when they listened to the movie clips.

The similarity diminished when the sentences were played in a random order or the track was played backwards, indicating that the region is used for higher-order processing.

These results suggest that there is an underlying organization that dictates how the visual cortex is repurposed in blind people, and that it is not random.

More information: Naturalistic Auditory Stories Synchronize "Visual" Cortices Across Congenitally Blind but Not Sighted Individuals, *JNeurosci*, [DOI: 10.1523/JNEUROSCI.0298-19.2019](https://doi.org/10.1523/JNEUROSCI.0298-19.2019)

Provided by Society for Neuroscience

Citation: How the brain repurposes unused regions (2019, September 23) retrieved 19 December 2022 from <https://medicalxpress.com/news/2019-09-brain-repurposes-unused-regions.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is

provided for information purposes only.