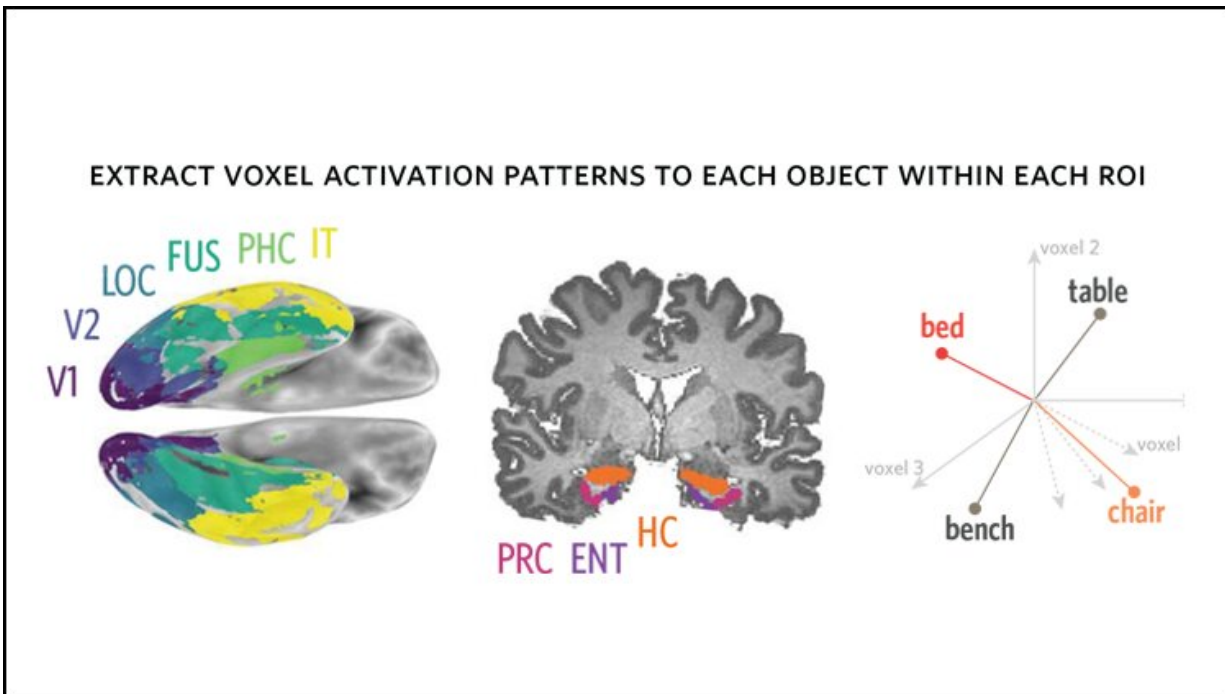


# The link between drawing and seeing in the brain

December 23 2019



Brain activation patterns during object recognition and production. Credit: Fan et al., *JNeurosci* 2019.

Drawing an object and naming it engages the brain in similar ways, according to research recently published in *JNeurosci*. The finding demonstrates the importance of the visual processing system for producing drawings of an object.

In a study by Fan et al., [healthy adults](#) performed two tasks while the researchers recorded brain activity using functional magnetic resonance imaging: they identified pieces of furniture in pictures and produced drawings of those pieces of furniture.

The researchers used machine learning to discover similar patterns of [brain activity](#) across both tasks within the occipital cortex, an area of the brain important for visual processing. This means people recruit the same neural representation of an object whether they are drawing it or seeing it.

As the participants drew each object multiple times, the activity patterns in occipital cortex remained unchanged, but the connection between [occipital cortex](#) and parietal cortex, an area involved in motor planning, grew more distinct. This suggests that drawing practice enhances how the brain shares information about an object between different regions over time.

**More information:** Relating Visual Production and Recognition of Objects in Human Visual Cortex, *JNeurosci* (2019). [DOI: 10.1523/JNEUROSCI.1843-19.2019](#)

Provided by Society for Neuroscience

Citation: The link between drawing and seeing in the brain (2019, December 23) retrieved 9 April 2024 from <https://medicalxpress.com/news/2019-12-link-brain.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.
---