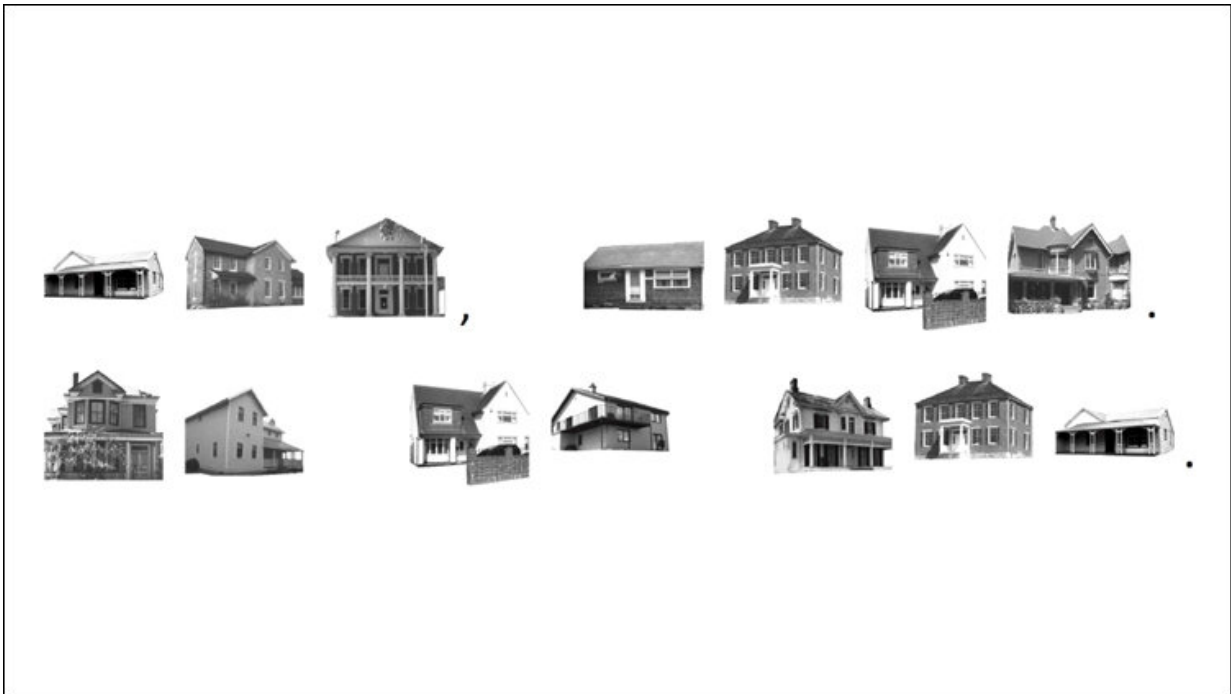


# Learning a second alphabet for a first language

February 11 2019

---



Example of part of a story printed in HouseFont. It reads, 'See father. Father is here.' Credit: Martin et al., *eNeuro* (2019)

A part of the brain that maps letters to sounds can acquire a second, visually distinct alphabet for the same language, according to a study of English speakers published in *eNeuro*. The research challenges theoretical constraints on the range of visual forms available to represent written language.

For adults, becoming fluent in a [foreign language](#), particularly one with a new alphabet, can be challenging. This may be because their brain has been specialized by their first language. It is unclear whether the so-called visual word form area (VWFA)—a brain region that responds to letters—is similarly inflexible in adulthood.

Lea Martin, Julie Fiez, and colleagues taught undergraduate university students how to read a fictional writing system called HouseFont, which assigns images of houses to English phonemes. Participants achieved proficiency in this pseudo writing system akin to a first-grade reading level. After the [training](#), the researchers observed increased VWFA activity that predicted [participants'](#) reading speed. This effect was not observed in the parahippocampal place area—a brain region that has been shown to respond selectively to images of houses. These findings suggest HouseFont was acquired as an additional alphabet, and show how learning a new writing system shapes the reading brain.

**More information:** The VWFA is the home of orthographic learning when houses are used as letters, *eNeuro*, [DOI: 10.1523/ENEURO.0425-17.2019](#)

Provided by Society for Neuroscience

Citation: Learning a second alphabet for a first language (2019, February 11) retrieved 23 April 2024 from <https://medicalxpress.com/news/2019-02-alphabet-language.html>

<p>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.</p>
--