

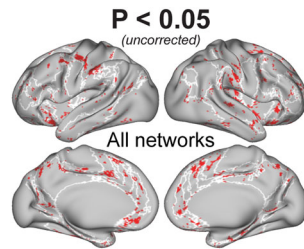
This Week in The Journal

Comparing Brain Network Organization in Parent-Child Pairs

Shefali Sanjana Rai, Kate J. Godfrey, Kirk Graff, Ryann Tansey, Daria Merrikh et al.

(see article [e0388262026](#))

A potential caveat to previous research exploring age effects on brain network organization is that these studies focus on adult demographics. Rai et al. advanced understanding by using fMRI to compare network organization and how well brain areas communicate with each other (also known as functional connectivity) in parent-child pairs. Large-scale brain network organization during passive video viewing was mostly shared between parents and children, though there was less confidence in network assignments for children. Notably, distinctly defining networks in individuals unveiled a higher sensitivity to age effects on functional connectivity as participants moved. According to the authors, this work suggests person-



These brain maps show vertex-wise differences in network assignment frequency between children and adults. Highlighted in red are between-group differences. Salience, cinguloopercular, somatomotor dorsal, and parietal-occipital networks are outlined in white. See Rai et al. for more information.

specific network definitions may improve fMRI accuracy in pediatric research.

How Does the Neural Grid Code Influence Behavioral Flexibility?

Linda Yu, Avinash Rao Vaidya, Aigerim Akhmetzhanova, Sienna Bruinsma, Matt Nassar

(see article [e0040262026](#))

Behaving quickly in new situations involves remembering behaviors from

past experiences and using them in new situations. Theoretical studies suggest this behavioral transfer relies on a neural grid code that maps the environmental context from previous experiences and generalizes this map to new contexts. But does this neural grid code directly play a role in the transfer of past behaviors to new situations? Using fMRI, Yu and colleagues measured a neural grid-like representation in humans and assessed whether the dynamics of this grid-like code aligns with rotating spatial targets in two different contexts. A grid-like neural code in the right posterior parietal cortex rotated with target positions, but this rotation was too slow to account for rapid performance improvements in new contexts. Instead, representations of target identity and spatial position predicted transfer behavior. According to Yu et al., this work reveals that the rotation of this grid-like neural code does not account for rapid knowledge transfer to new behavioral contexts.

This Week in The Journal was written by Paige McKeon
<https://doi.org/10.1523/JNEUROSCI.twij.46.41.2026>