Semantic Gist Arises from Vector Space Composition in the Temporal Pole

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Presentation Abstract Summary The question of how meaning arises from the composition of individual words into phrases is fundamental for understanding human cognition. Recent evidence suggests that gist-based meaning can be computed from linear composition of individual words represented in a high dimensional semantic space. Using fMRI in conjunction with model-based representational similarity analysis, we show that similar compositional principles are implemented in the human temporal pole. We further show that individual variation in semantic gist effects are predicted by differences in model fit, suggesting that linear composition may play a key role in gist-based processes.

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