

Does simile comprehension differ from metaphor comprehension? -A functional MRI study-

Midori Shibata
Hokkaido University

Akira Toyomura
Tokyo Denki University

Jun-ichi Abe
Hokkaido University

Abstract: Since Aristotle, people have believed that metaphors and similes express the same type of figurative meaning, despite the fact that they are expressed with different sentence patterns. In contrast, recent psycholinguistic models have suggested that metaphors and similes may promote different comprehension processes. In this study, we investigated the neural substrates involved in the comprehension of metaphor and simile using functional magnetic resonance imaging (fMRI) to evaluate whether simile comprehension differs from metaphor comprehension or not. In the metaphor and simile sentence conditions, higher activation was seen in the left inferior frontal gyrus (BA 45/47) and temporal regions. This result suggests that the activation in both metaphor and simile conditions show similar patterns. The result also suggests that the activation patterns are affected by the properties of words (degree of the comprehensibility or similarity between a topic and a vehicle) rather than by the different sentence pattern.