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[Title]

Brain activity reflecting learning of implied motion in abstract paintings

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Previously, a work in our group showed that the neural machinery ordinarily engaged during perception of real visual motion is activated when people view paintings explicitly designed to convey a sense of visual motion (Kim & Blake, 2007). In the present study using fMRI, we investigated functional plasticity following learning of implied motion in abstract paintings. We compared participants' neural responses to abstract paintings with (MPs) or without (SPs) implied motion before and after a learning session where participants learned about only a half of MPs and SPs outside the MR scanner. Results showed that areas along the dorsal visual stream including bilateral MT+ and the posterior parietal regions showed greater response to MPs than to SPs only after, not before, learning. The learning induced functional plasticity was transferred to unlearned MPs and reflected in functional connectivity as well.