

Table SI. Main effect of movement (moved > static)

Activation during movements of right hand						Activation during movements of left hand						Anatomical structure	Functional area				
Left hemisphere			Right hemisphere			Left hemisphere			Right hemisphere								
X	Y	Z	t-value	X	Y	Z	t-value	X	Y	Z	t-value						
-34	-14	54	8.67	56	-12	40	4.65	-40	-10	54	8.73	44	-12	54	5.88	Precentral gyrus	Primary motor cortex
-32	-20	62	8.90	40	-8	56	5.87					34	-6	60	4.20	Precentral gyrus	Premotor cortex
-4	-10	60	6.28	30	-6	56	4.19	-12	-6	68	7.13					Medial frontal gyrus/ Superior frontal gyrus	Premotor cortex
-42	-68	6	5.34	54	-66	4	5.19	-58	6	30	6.92	60	6	30	6.44	Fusiform gyrus	
-48	-74	4	5.05									58	14	4	5.06	Inferior frontal gyrus	Broca's area
												52	-70	4	6.60	Middle occipital gyrus	Visual association cortex (V3,V4,V5)
								-30	-54	60	4.95	28	-58	58	3.92	Superior parietal lobule	Somatosensory association cortex

Activations are thresholded at  $p < 0.001$  (uncorrected) with a minimum cluster size of 20 voxels. Cluster size is not reported, due to confluent activations. Centre of activation foci are given in Montreal Neurological Institute (MNI) coordinates.