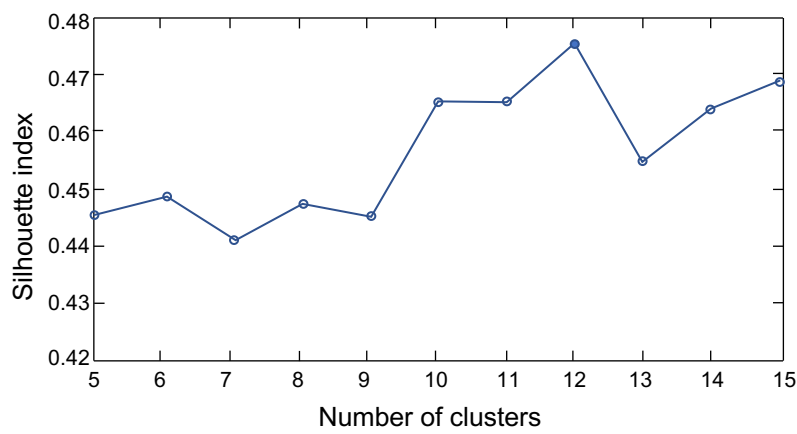


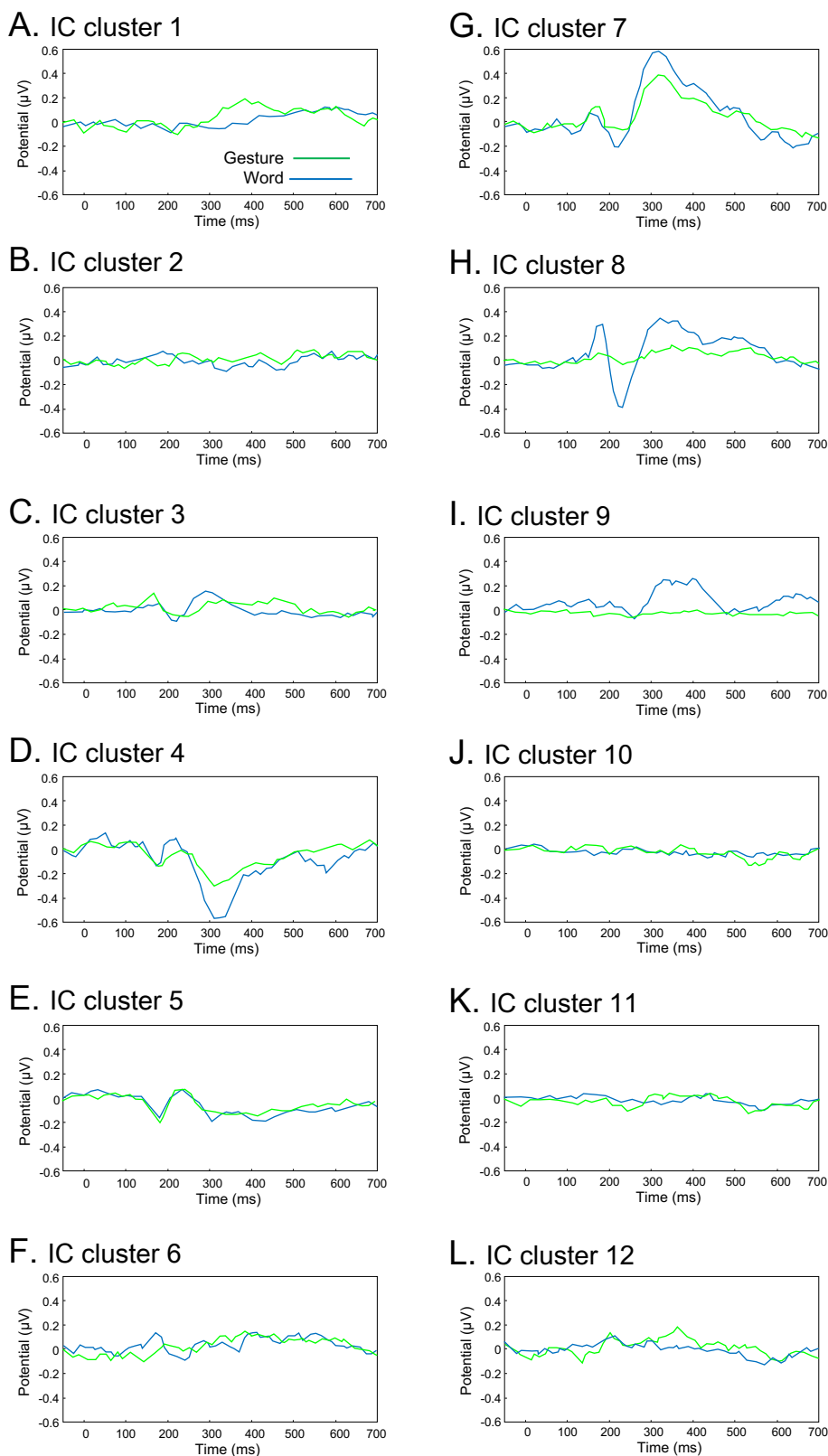
Electroencephalographic effective connectivity analysis of the neural networks during gesture and speech production planning in young adults

Sato et al.

Supplementary information

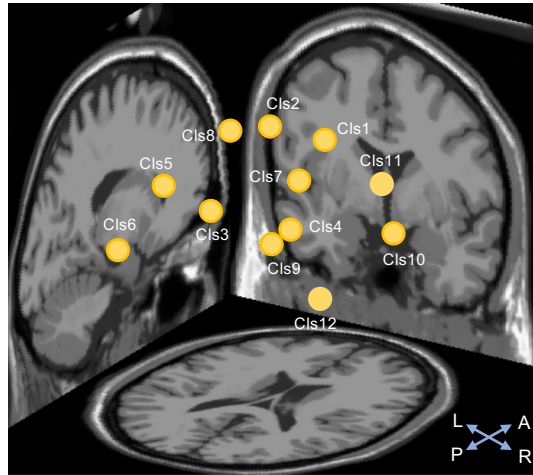


Supplementary Figure S1. Relationships between number of IC clusters and Silhouette index on k-means clustering.

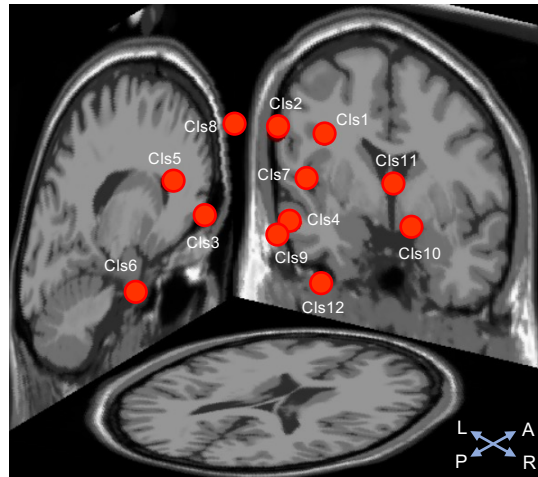


Supplementary Figure S2. RMS evoked potentials of each IC cluster in the gesture and word planning conditions (A-L). Zero in the abscissas indicate onset of the images. Green and blue lines indicate the gesture and word planning conditions, respectively.

A. Gesture



B. Word



Supplementary Figure S3. Locations of the 12 IC clusters in the gesture- (A) and word- (B) planning conditions. Each cluster was plotted according to the mean MNI coordinates of the individual ICs included in each IC cluster. Cls, IC cluster; A, anterior; P, posterior; L, left; R, right.

Supplementary Table S1. Distributions of probabilistic dipole density (probability) in the 12 IC clusters.

	Brain regions	Probability		Brain regions	Probability
Cluster 1	Rt paracentral lobule	0.273	Cluster 7	Rt paracentral lobule	0.188
	Rt middle cingulate gyrus	0.212		Rt postcentral gyrus	0.156
	Rt medial frontal gyrus	0.152		Rt precunes	0.156
	Rt middle frontal gyrus	0.091		Rt superior parietal lobule	0.156
	Rt superior frontal gyrus	0.061		Rt inferior parietal lobule	0.063
	Rt precentral gyrus	0.03			
Cluster 2	Lt middle frontal gyrus	0.211	Cluster 8	Lt paracentral lobule	0.37
	Lt superior frontal gyrus	0.211		Lt precunes	0.13
	Lt precentral gyrus	0.158		Lt superior parietal lobule	0.065
	Lt middle cingulate gyrus	0.053	Lt precentral gyrus	0.022	
	Lt medial frontal gyrus	0.053			
Cluster 3	Lt inferior parietal lobule	0.263	Cluster 9	Lt anterior cingulate gyrus	0.138
	Lt precunes	0.263		Lt inferior frontal gyrus	0.138
	Lt superior parietal lobule	0.211		Lt. insula	0.087
Cluster 4	Rt middle cingulate gyrus	0.229		Lt medial frontal gyrus	0.087
	Rt posterior cingulate gyrus	0.125		Lt middle frontal gyrus	0.075
				Lt middle cingulate gyrus	0.05
				Lt precentral gyrus	0.05
Cluster 5	Lt superior temporal gyrus	0.256	Cluster 10	Rt inferior frontal gyrus	0.271
	Lt middle temporal gyrus	0.191		Rt insula	0.188
	Lt inferior parietal lobule	0.106		Rt precentral gyrus	0.146
	Lt postcentral gyrus	0.106		Rt superior temporal gyrus	0.104
	Lt supramarginal gyrus	0.085		Rt middle frontal gyrus	0.063
	Lt insula	0.064			
	Lt transverse temporal gyrus	0.043	Cluster 11	Rt middle cingulate gyrus	0.256
Cluster 6	Lt inferior temporal gyrus	0.177		Rt medial frontal gyrus	0.256
	Lt middle temporal gyrus	0.177		Rt superior frontal gyrus	0.186
	Lt middle occipital gyrus	0.152		Rt middle frontal gyrus	0.093
	Lt fusiform gyrus	0.114			
	Lt lingual gyrus	0.063	Cluster 12	Rt middle temporal gyrus	0.174
	Lt cuneus	0.038		Rt superior temporal gyrus	0.159
		Rt inferior temporal gyrus		0.159	
		Rt inferior parietal lobule		0.087	
		Rt insula		0.087	
		Rt supramarginal gyrus		0.087	
		Rt middle occipital gyrus		0.058	
		Rt postcentral gyrus		0.043	
		Rt transvers temporal gyrus		0.029	

Lt, left; Rt, right.