

Large-scale brain networks underlying successful and unsuccessful encoding, maintenance, and retrieval of everyday scenes in visuospatial working memory

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SUPPLEMENTARY MATERIAL

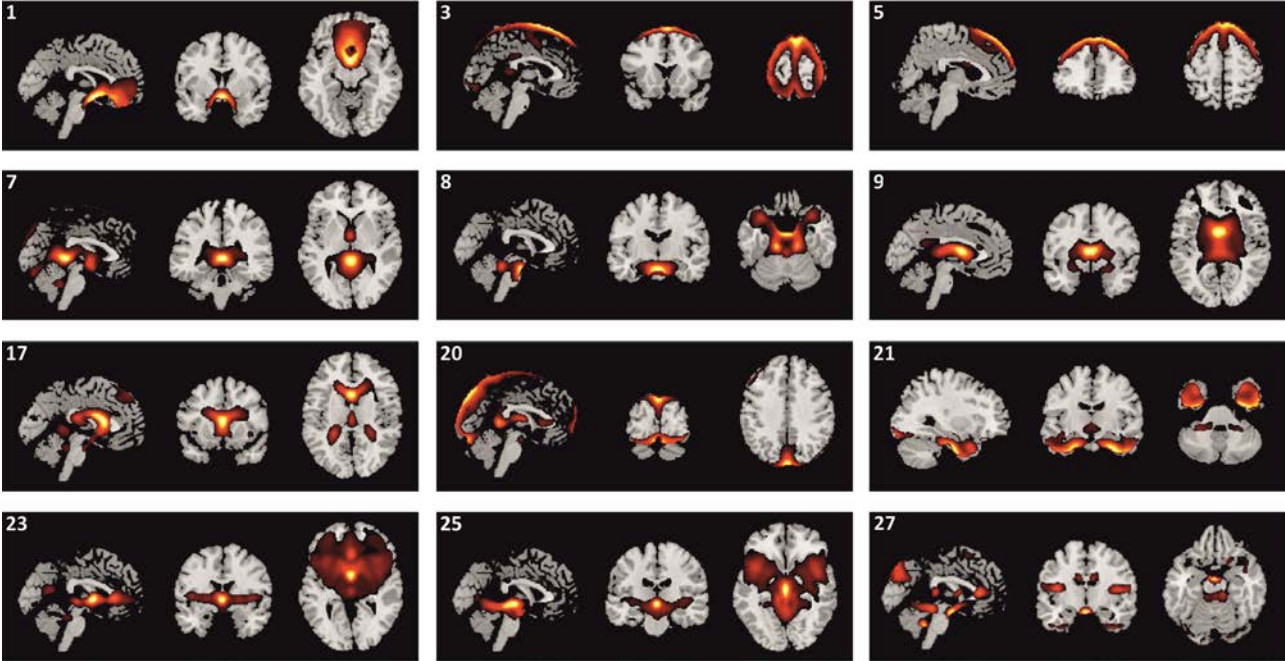


Figure S1: Discarded independent components.

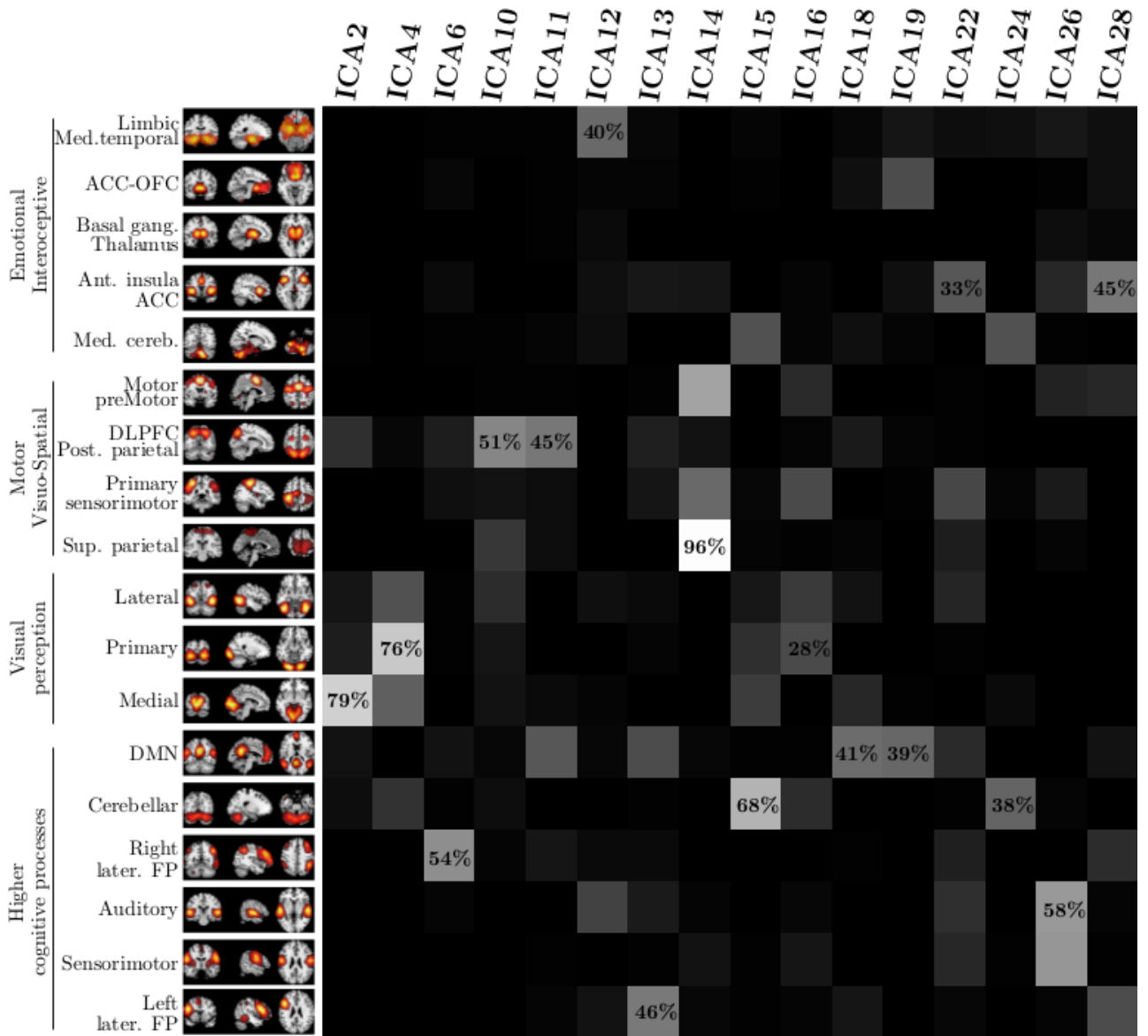


Figure S2: Percentage of overlap of the 16 unnoisy independent components (IC) with the correspondent BrainMap IC.

Table S1: Anatomical localizations, corresponding Brodmann area(s), volume (cc), maximum Z-scores and Talairach coordinates (obtained using the Talairach utility provided in GIFT toolbox on group-ICA components maps) of task-related independent components (IC).

Brain network	IC	Area	Brodmann Area	Volume (cc)	Max Z-score & Talairach (x, y, z) L/R	
<i>Attention</i>	6	Inferior Parietal Lobule	7, 40	NA/3.7	NA/5.5 (48, -50, 52)	
		Middle Frontal Gyrus	8, 9, 10, 11	NA/2.6	NA/4.6 (46, 48, -11)	
		Superior Parietal Lobule	7	NA/0.4	NA/4.6 (42, -58, 51)	
		Superior Frontal Gyrus	10	NA/0.4	NA/4.1 (36, 60, -5)	
		Inferior Frontal Gyrus	10	NA/0.1	NA/3.7 (50, 44, -11)	
		Supramarginal Gyrus	*	NA/0.1	NA/3.6 (51, -51, 36)	
	10	Precuneus	7, 19	0.7/1.3	4.4 (-6, -61, 62)/5.3 (16, -63, 62)	
		Superior Parietal Lobule	7	1.1/1.9	4.5 (-18, -67, 57)/5.0 (20, -69, 57)	
		Postcentral Gyrus	7	NA/0.1	NA/4.0 (10, -53, 67)	
		Cuneus	19	NA/0.1	NA/3.6 (24, -86, 37)	
	11	Precuneus	7, 31	7.9/8.1	7.5 (0, -64, 46)/7.3 (4, -70, 42)	
		Cingulate Gyrus	23, 24, 31	4.4/4.7	6.3 (0, -35, 29)/6.6 (2, -39, 30)	
		Cuneus	7	0.4/0.3	5.4 (-4, -66, 33)/4.1 (4, -76, 37)	
		Posterior Cingulate	23, 30	0.3/0.4	4.8 (-2, -43, 24)/4.9 (2, -42, 22)	
		Superior Parietal Lobule	7	NA/0.1	NA/3.9 (8, -67, 53)	
		Inferior Parietal Lobule	40	NA/0.1	NA/3.6 (42, -62, 45)	
	13	Inferior Parietal Lobule	7, 39, 40	2.1/NA	4.5 (-50, -58, 38)/NA	
		Angular Gyrus	39	0.8/NA	4.4 (-50, -59, 34)/NA	
		Supramarginal Gyrus	*	0.4/NA	4.2 (-51, -59, 31)/NA	
		Middle Temporal Gyrus	39	0.3/NA	3.8 (-61, -41, -1)/NA	
		Superior Temporal Gyrus	39	0.3/NA	3.8 (-51, -59, 27)/NA	
		Inferior Frontal Gyrus	47	0.3/NA	3.8 (-50, 21, -8)/NA	
		Superior Parietal Lobule	7	0.1/NA	3.7 (-40, -62, 51)/NA	
		Middle Frontal Gyrus	*	0.1/NA	3.6 (-48, 42, -9)/NA	
	<i>Default mode</i>	18	Posterior Cingulate	23, 29, 30, 31	2.6/2.9	5.1 (0, -53, 19)/5.4 (12, -54, 16)
			Sub-Gyral	*	0.2/0.4	4.8 (-10, -57, 18)/4.7 (12, -57, 19)
			Extra-Nuclear	*	0.1/0.2	3.9 (-12, -55, 21)/4.7 (18, -55, 19)
		Precuneus	23, 31	1.1/0.5	4.4 (-4, -59, 21)/4.1 (12, -59, 23)	
		Cingulate Gyrus	31	0.2/0.1	4.1 (0, -57, 27)/3.8 (4, -59, 27)	
		Parahippocampal Gyrus	*	NA/0.1	NA/3.6 (10, -46, 4)	
19		Medial Frontal Gyrus	9, 10	1.9/1.3	4.6 (-4, 51, 9)/4.4 (4, 53, 10)	
		Anterior Cingulate	32	0.6/0.2	4.4 (-4, 47, 9)/4.3 (4, 49, 9)	
		Precuneus	31	0.1/NA	3.8 (0, -49, 32)/NA	
		Cingulate Gyrus	*	0.1/NA	3.6 (0, -49, 28)/NA	
<i>Salience</i>	12	Superior Temporal Gyrus	22, 38	4.4/3.8	8.8 (-42, 9, -17)/8.3 (40, 13, -19)	
		Middle Temporal Gyrus	21, 38	1.0/2.3	6.9 (-48, 5, -15)/6.2 (48, 7, -15)	
		Sub-Gyral	13, 21	1.5/1.8	6.6 (-46, -3, -13)/6.1 (46, 3, -15)	
		Uncus	28, 34	0.6/0.5	5.3 (-32, 3, -19)/6.5 (28, 9, -21)	
		Inferior Frontal Gyrus	47	0.6/0.6	5.1 (-34, 13, -16)/6.5 (36, 13, -17)	
		Third Ventricle	*	NA/0.2	NA/6.1 (0, -6, -8)	
		Parahippocampal Gyrus	34	0.4/0.3	4.4 (-30, -1, -18)/5.1 (24, 3, -17)	

	Extra-Nuclear	*	0.1/NA	4.0 (-4, -6, -8)/NA	
	Anterior Cingulate	*	0.1/NA	3.7 (0, 5, -10)/NA	
<i>Visual</i>	22 Superior Temporal Gyrus	22, 38	NA/0.4	NA/4.4 (50, 17, -9)	
	Inferior Frontal Gyrus	47	NA/0.3	NA/4.0 (46, 15, -7)	
	Inferior Parietal Lobule	40	0.3/NA	3.7 (-59, -35, 31)/NA	
	28 Cingulate Gyrus	32	0.8/0.8	4.9 (0, 29, 32)/4.6 (4, 21, 41)	
	Medial Frontal Gyrus	6, 8, 9	0.4/0.5	4.1 (-4, 22, 43)/4.5 (4, 25, 39)	
	Superior Temporal Gyrus	38	0.2/0.1	4.2 (-48, 15, -9)/3.7 (48, 17, -11)	
	Superior Frontal Gyrus	8	0.2/0.3	3.7 (-2, 20, 51)/4.2 (2, 20, 51)	
	Anterior Cingulate	32	0.4/0.3	3.9 (0, 34, 20)/4.1 (4, 32, 24)	
	Inferior Frontal Gyrus	47	0.1/NA	3.9 (-44, 15, -9)/NA	
	2 Cuneus	7, 17, 18, 19, 23, 30	8.9/7.9	7.2 (-2, -69, 9)/7.2 (2, -73, 13)	
	Lingual Gyrus	18, 19	4.2/3.9	6.9 (-10, -60, 5)/5.8 (4, -72, 4)	
	Posterior Cingulate	23, 30, 31	2.4/2.5	6.5 (-6, -69, 13)/6.9 (6, -69, 11)	
	Precuneus	7, 19, 31	1.0/2.0	4.8 (-2, -69, 20)/6.0 (6, -69, 18)	
	Culmen	*	0.6/0.3	5.5 (-8, -56, 1)/4.2 (16, -49, -3)	
	Extra-Nuclear	*	NA/0.3	NA/4.6 (24, -58, 7)	
	Parahippocampal Gyrus	19, 30	0.3/0.4	4.3 (-12, -48, 4)/4.5 (14, -50, 4)	
	4 Fusiform Gyrus	18, 19	1.6/1.0	6.2 (-18, -90, -11)/5.7 (20, -88, -11)	
	Inferior Occipital Gyrus	17, 18	2.4/2.0	6.1 (-14, -92, -9)/5.8 (24, -88, -11)	
	Lingual Gyrus	17, 18	6.0/5.0	5.9 (-18, -94, -9)/5.6 (16, -88, -9)	
	Cuneus	17, 18	2.6/2.0	5.3 (-12, -97, 0)/5.1 (12, -95, 1)	
	Middle Occipital Gyrus	18, 19	2.5/1.0	5.1 (-22, -86, -7)/4.9 (26, -84, -8)	
	Declive	*	0.4/0.1	4.1 (-34, -82, -16)/3.8 (12, -80, -11)	
Sub-Gyral	*	0.1/0.0	3.7 (-24, -91, 0)/-999.0 (0, 0, 0)		
<i>Visuo-cereb.</i>	16 Precentral Gyrus	4, 6	2.5/NA	5.7 (-40, -14, 62)/NA	
	Postcentral Gyrus	1, 2, 3, 4	2.8/NA	4.8 (-42, -15, 54)/NA	
	Middle Frontal Gyrus	*	0.1/NA	3.7 (-32, -7, 61)/NA	
	15 Culmen	*	0.3/0.7	3.7 (-32, -51, -19)/4.2 (4, -66, -7)	
	Declive	*	0.6/0.4	3.9 (-30, -71, -18)/4.1 (42, -57, -22)	
	Culmen of Vermis	*	0.3/0.1	4.0 (0, -66, -7)/4.0 (4, -62, -5)	
	Tuber	*	NA/0.1	NA/3.7 (44, -54, -24)	
	Declive of Vermis	*	NA/0.1	NA/3.6 (2, -74, -10)	
	<i>Sensori-motor</i>	14 Medial Frontal Gyrus	6, 32	1.9/2.7	5.8 (-2, -3, 48)/6.2 (2, -3, 48)
		Cingulate Gyrus	24, 32	1.0/1.6	5.5 (-2, 0, 46)/5.7 (2, 0, 44)
Paracentral Lobule		5, 6, 31	0.3/0.4	4.0 (-2, -11, 45)/4.2 (2, -11, 45)	
Superior Frontal Gyrus		6	0.1/0.1	4.1 (-2, 6, 48)/4.2 (2, 6, 49)	
Postcentral Gyrus		1, 2, 3	NA/0.6	NA/3.9 (34, -32, 61)	
<i>Auditory</i>	Precentral Gyrus	4	NA/0.3	NA/3.7 (40, -19, 56)	
	26 Superior Temporal Gyrus	13, 21, 22, 41, 42	7.1/6.5	6.5 (-59, -7, 6)/7.8 (61, -9, 6)	
	Transverse Temporal Gyrus	41, 42	1.6/1.2	5.8 (-59, -9, 10)/6.6 (61, -17, 10)	
	Precentral Gyrus	4, 6, 13, 43	3.1/4.0	6.2 (-59, -3, 13)/6.6 (57, -11, 10)	
	Insula	13, 40	1.9/2.8	4.8 (-44, -13, 6)/5.5 (46, -13, 8)	
	Postcentral Gyrus	40, 43	0.6/1.2	5.2 (-57, -7, 17)/5.3 (61, -17, 14)	
Middle Temporal Gyrus	21	NA/0.1	NA/4.3 (61, -4, -3)		

<i>Cerebellar</i>		Parahippocampal Gyrus	*	NA/0.1	NA/3.8 (20, -1, -17)
	24	Fourth Ventricle	*	NA/0.5	NA/14.3 (0, -48, -26)
		Culmen	*	1.2/1.7	8.5 (-4, -44, -20)/11.7 (4, -44, -21)
		Nodule	*	0.6/0.8	10.0 (-4, -48, -30)/11.5 (0, -48, -30)
		Fastigium	*	0.3/0.3	6.7 (-4, -52, -21)/7.1 (8, -48, -21)
		Cerebellar Lingual	*	0.1/0.3	3.9 (-4, -45, -16)/5.3 (0, -44, -16)
		Cerebellar Tonsil	*	0.1/0.1	4.5 (-24, -33, -34)/3.9 (24, -33, -32)
		Declive	*	0.1/0.3	3.6 (-4, -63, -20)/3.7 (0, -63, -22)