

## SUPPLEMENTARY MATERIAL

Table S1: Divergent Thinking. Anatomical specification, Talairach coordinates, maximum Z value and volume (mm<sup>3</sup>) of the significantly activated areas (l.m.: local maxima within each volume) in the D > C direct contrast. The results were corrected for whole brain multiple comparisons at the cluster level ( $p < .01$ ).

Area	x	y	z	BA	mm3	zmax
Superior frontal gyrus	-17	52	15	10	344223	6.190
Superior frontal gyrus	-17	25	45	8/6	l.m.	7.073
Inferior frontal & Middle frontal gyri	-47	13	-6	44/45/47/10/11	l.m.	6.741
Inferior frontal & Middle frontal gyri	-35	16	-18	47/11	l.m.	7.087
Ventral medial prefrontal cortex	-2	37	-15	10/11/32	l.m.	5.932
Dorsal medial prefrontal cortex	-11	46	30	8/9	l.m.	6.333
Anterior cingulate	1	-5	33	24	l.m.	3.612
Amygdala	25	-14	-18		l.m.	6.020
Hippocampal formation & Parahippocampal gyrus	-20	-32	-12		l.m.	7.208
Hippocampal formation & Parahippocampal gyrus	22	-44	-12		l.m.	6.226
Fusiform & parahippocampal gyri	-23	-44	-15	20/36/35	l.m.	7.459
Posterior cingulate	-8	-41	30	31	l.m.	4.567
Posterior cingulate	10	-59	6	29/30/31	l.m.	6.705
Posterior cingulate	-11	-56	3	29/30/31	l.m.	7.758
Inferior temporal gyrus	-26	-11	-33	20	l.m.	5.459
Inferior temporal & middle temporal gyri	-53	-17	-15	21/20	l.m.	5.877
Middle temporal gyrus	-50	-50	-9	21/37	l.m.	4.602
Angular gyrus	-38	-74	33	39	l.m.	5.164
Cuneus	10	-95	6	18/19	l.m.	5.491
Lingual gyrus	-8	-77	0	18	l.m.	6.820
Superior occipital gyrus/Cuneus	-26	-92	33	19	l.m.	4.277
Thalamus	-5	-17	6		l.m.	5.019
Cerebellum	-47	-65	-21		l.m.	3.432

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Cerebellum	31	-86	-24			l.m.	6.584
Insula	-32	-23	21			l.m.	4.077
Temporal pole	-35	-2	-27			l.m.	5.668
Temporal pole	-35	-5	-39	38		l.m.	5.564
Insula	34	-17	6		2565		4.699
Insula	22	-35	18			l.m.	3.830
Temporal pole	37	13	-30	38	2808		4.305
Temporal pole	28	-11	-45	38		l.m.	5.054
Cerebellum	7	-62	-45		1917		4.829
Postcentral gyrus	-32	-29	45	1/2	7128		5.522
Postcentral gyrus	-26	-35	66	7		l.m.	4.292
Postcentral gyrus	19	-32	54	1/2	1512		4.444

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Table S2: Working Memory. Anatomical specification, Talairach coordinates, maximum Z value and volume (mm<sup>3</sup>) of the significantly activated areas (l.m.: local maxima within each volume) in the C > D direct contrast. The results were corrected for whole brain multiple comparisons at the cluster level ( $p < .01$ ).

<b>Area</b>	<b>x</b>	<b>y</b>	<b>z</b>	<b>BA</b>	<b>mm3</b>	<b>zmax</b>
Middle frontal gyrus	43	-2	39	6/8/9/46	65556	-6.890
Middle frontal gyrus	31	1	54	6/8/9	l.m.	-6.130
Middle frontal gyrus	40	25	27	8/9	l.m.	-5.892
Middle frontal gyrus	34	46	3	10	l.m.	-5.710
Inferior frontal/Precentral gyri	49	1	15	44/6	l.m.	-5.509
Posterior medial frontal cortex	10	-5	51	6	l.m.	-5.710
Insula	37	10	3		l.m.	-4.856
Middle frontal gyrus	-35	-11	48	6	1458	-4.405
Posterior medial frontal cortex	-17	-14	51	6	l.m.	-3.902
Superior parietal lobule	34	-53	48	7	91395	-7.575
Superior parietal lobule	25	-68	54	7	l.m.	-6.800
Superior orbital gyrus	28	-74	36	19	l.m.	-6.114
Middle temporal gyrus	58	-56	9	37/39/21	l.m.	-5.471
Middle orbital gyrus	37	-74	6	19	l.m.	-5.613
Fusiform & Lingual gyri	43	-68	-6	19/18	l.m.	-5.876
Superior parietal lobule	-29	-53	45	7	15255	-5.929
Superior temporal gyrus	-38	-41	12	40	l.m.	-3.589
Posterior cingulate gyrus	10	-35	36	31	1458	-4.023
Posterior cingulate gyrus	1	-29	24	23/31	l.m.	-4.456
Middle orbital gyrus	-41	-77	3	19/37	1377	-4.083
Thalamus	7	-26	0		1539	-4.608
Cerebellum	-8	-83	-27		11637	-5.628
Cerebellum	-32	-68	-48		l.m.	-3.976

Table S3: Cognitive Demand. Anatomical specification, Talairach coordinates, maximum Z value and volume (mm<sup>3</sup>) of the significantly activated areas (l.m.: local maxima within each volume) in the H > L direct contrast. The results were corrected for whole brain multiple comparisons at the cluster level (p < .01).

<b>Area</b>	<b>x</b>	<b>y</b>	<b>z</b>	<b>BA</b>	<b>mm3</b>	<b>zmax</b>
Middle frontal gyri	43	22	30	9/8	2862	4.958
Inferior frontal & Precentral gyri	52	4	33	44/6	l.m.	3.503
Inferior frontal gyrus	43	4	21	44	l.m.	3.372
Superior & middle frontal gyri	25	-8	54	6	6696	5.280
Inferior frontal gyrus	-44	7	21	44/45	78300	7.074
Inferior & middle frontal gyri	-38	37	-3	47/10	l.m.	6.689
Superior & middle frontal gyri	-26	-5	51	6	l.m.	6.496
Medial frontal & Anterior cingulate cortices	-5	13	45	6/32	l.m.	6.591
Insula	-29	13	-3		l.m.	6.282
Putamen/Globus Pallidus	-14	1	0		l.m.	5.110
Putamen/Globus Pallidus	13	-2	-3		4131	4.740
Superior parietal lobule	19	-65	60	7	4077	4.183
Superior parietal lobule	-26	-65	48	7	27351	6.388
Superior & inferior parietal lobule	-38	-53	45	7/40	l.m.	5.945
Inferior parietal lobule	-47	-41	39	39/40	l.m.	6.000
Middle temporal gyrus	-47	-62	3	37	17334	4.251
Inferior temporal & Fusiform gyri	-44	-59	-9	37/19	l.m.	4.626
Middle orbital gyrus	-44	-74	-9	19/18	l.m.	4.887
Cerebellum	-29	-62	-33		l.m.	4.893
Cerebellum	31	-71	-42		23220	5.831
Cerebellum	-32	-71	-45		l.m.	4.901