

Supplementary material

Contents

Main effects versus low-level baseline	2
Supplementary Table 1:	2
Supplementary Table 2:	3
Supplementary Table 3:	3
Supplementary Table 4:	4
Scatterplots for correlations between rating scores and brain activity.....	6

Main effects versus low-level baseline

We have calculated low level baseline contrasts for all four condition and report the FWE corrected ($p < 0.05$, voxel-level) results in tables below.

Supplementary Table 1: Activations during negative OS and neutral AS trials (against low level baseline). Coordinates are reported in the MNI system. The results are ordered by cluster with all locations of local maxima listed.

Brain Area (for clusters the cluster number is listed)	Peak voxel t-value	MNI-coordinates			Hemisphere
Cluster 1: 22405 voxels					
Middle Occipital Gyrus	T = 20.94	-28	-82	20	L
Lingual Gyrus	T = 19.33	-12	-88	-6	L
Lingual Gyrus	T = 18.85	8	-84	-8	R
Calcarine Gyrus	T = 18.41	6	-92	-2	R+L
Calcarine Gyrus	T = 18.36	8	-90	0	R
V2	T = 17.57	8	-96	10	R
Fusiform Gyrus	T = 17.41	26	-82	-10	R
Middle Occipital Gyrus	T = 16.91	-22	-94	20	L
Superior Occipital Gyrus	T = 16.78	16	-96	18	R
Inferior Occipital Gyrus	T = 15.29	-30	-78	-10	L
Middle Occipital Gyrus	T = 15.04	28	-90	14	R
Cluster 2: 823 voxels					
Middle Frontal Gyrus	T = 10.86	26	-2	50	R
Superior Frontal Gyrus	T = 6.32	34	2	64	R
Cluster3: 499 voxels					
Posterior-Medial Frontal	T = 8.35	-6	14	46	L
Posterior-Medial Frontal	T = 7.42	-8	6	56	L
Posterior-Medial Frontal	T = 7.35	-6	8	54	L
Cluster4: 145 voxels					
Precentral Gyrus	T = 8.35	46	2	30	R
Cluster5: 116 voxels					
Inferior Frontal Gyrus (pars triangularis)	T = 6.35	-52	26	28	L
Inferior Frontal Gyrus (pars triangularis)	T = 6.26	-46	26	26	L
Cluster6: 78 voxels					
Middle Frontal Gyrus	T = 5.81	42	40	32	R
Cluster7: 24 voxels					
Middle Frontal Gyrus	T = 5.64	48	32	34	R
Middle Temporal Gyrus	T = 5.37	-50	-38	0	L
Middle Frontal Gyrus	T = 8.35	46	2	30	R

Supplementary Table 2: Activations during neutral OS and neutral AS trials (against low level baseline). Coordinates are reported in the MNI system. The results are ordered by cluster with all locations of local maxima listed.

Brain Area (for clusters the cluster number is listed)	Peak voxel t-value	MNI-coordinates			Hemisphere
Cluster 1: 20412 voxels					
Middle Occipital Gyrus	T = 22.45	-28	-82	20	L
Lingual Gyrus	T = 18.77	-12	-88	-6	L
Lingual Gyrus	T = 17.91	10	-84	-10	R
Fusiform Gyrus	T = 17.85	26	-82	-10	R
V2	T = 17.53	8	-96	10	R
Superior Occipital Gyrus	T = 17.51	16	-96	18	R
Middle Occipital Gyrus	T = 17.31	30	-90	14	R
Calcarine Gyrus	T = 17.15	6	-92	0	L
Superior Parietal Lobule	T = 15.27	-24	-62	50	L
Inferior Occipital Gyrus	T = 14.72	-30	-78	-10	L
Inferior Occipital Gyrus	T = 13.29	-44	-78	-10	L
Cluster2: 456 voxels					
Superior Frontal Gyrus	T = 10.58	26	-2	52	R
Cluster3 207 voxels					
Precentral Gyrus	T = 8.21	-42	0	32	L
Cluster4: 85 voxels					
Posterior-Medial Frontal	T = 5.77	-6	12	48	L
Posterior-Medial Frontal	T = 5.70	-8	8	54	L
Cluster 5: 84 voxels:					
Precentral Gyrus	T = 8.24	44	2	30	R

Supplementary Table 3: Activations during negative OS and positive AS trials (against low level baseline). Coordinates are reported in the MNI system. The results are ordered by cluster with all locations of local maxima listed.

Brain Area (for clusters the cluster number is listed)	Peak voxel t-value	MNI-coordinates			Hemisphere
Cluster 1: 21769 voxels					
Middle Occipital Gyrus	T = 21.20	-30	-80	20	L
Lingual Gyrus	T = 18.95	8	-84	-8	R
Lingual Gyrus	T = 18.67	-12	-88	-8	L
Calcarine Gyrus	T = 18.47	8	-90	0	R
Calcarine Gyrus	T = 18.41	6	-92	-2	R
Fusiform Gyrus	T = 17.80	26	-82	-10	R
V2	T = 17.63	8	-96	10	R
Superior Occipital Gyrus	T = 16.77	16	-96	18	R

Middle Occipital Gyrus	T = 16.64	-22	-94	20	L
Middle Occipital Gyrus	T = 15.43	28	-90	14	R
Inferior Occipital Gyrus	T = 14.91	-30	-78	-10	L
Cluster2: 531 voxels					
Temporal Pole	T = 8.88	58	4	-8	R
Cluster 3: 476 voxels					
Superior Frontal Gyrus	T = 9.73	26	-2	52	R
Superior Frontal Gyrus	T = 5.82	34	2	64	R
Cluster4: 394 voxels					
Posterior-Medial Frontal	T = 7.53	-8	6	58	L
Posterior-Medial Frontal	T = 7.49	-6	14	44	L
Cluster5: 354 Voxels					
Superior Temporal Gyrus	T = 6.97	-58	-4	0	L
Superior Temporal Gyrus	T = 6.31	-60	10	-6	L
Superior Temporal Gyrus	T = 5.15	-68	-14	2	L
Cluster 6: 59 voxels					
Precentral Gyrus	T = 7.05	44	2	30	R
Cluster 7: 35 voxels					
Inferior Parietal Lobule	T = 5.52	50	-40	50	R
Cluster 8: 25 voxels					
Middle Frontal Gyrus	T = 5.31	42	40	32	R
Middle Frontal Gyrus	T = 5.20	46	34	34	R
Cluster 9: 24 voxels					
Inferior Frontal Gyrus (pars Triangularis)	T = 5.39	-54	26	28	L
Inferior Frontal Gyrus (pars Triangularis)	T = 5.08	-46	26	26	L
Cluster 10: 19 voxels:					
Temporal Pole	T = 5.34	40	4	-20	R

Supplementary Table 4: Activations during neutral OS and positive AS trials (against low level baseline). Coordinates are reported in the MNI system. The results are ordered by cluster with all locations of local maxima listed.

Brain Area (for clusters the cluster number is listed)	Peak voxel t-value	MNI-coordinates			Hemisphere
Cluster 1: 22923 voxels					
Middle Occipital Gyrus	T = 21.20	-30	-80	20	L
Lingual Gyrus	T = 23.32	-30	-80	20	L
Fusiform Gyrus	T = 20.42	-12	-88	-6	L

Lingual Gyrus	T = 20.23	26	-82	-10	R
Calcarine Gyrus	T = 19.82	8	-84	-8	L+R
V2	T = 18.88	6	-92	-2	R
Superior Occipital Gyrus	T = 18.82	8	-96	10	R
Middle Occipital Gyrus	T = 18.39	16	-96	18	R
Inferior Occipital Gyrus	T = 18.19	30	-90	14	R
Superior Parietal Lobule	T = 16.43	-30	-80	-10	L
Inferior Occipital Gyrus	T = 15.97	-20	-64	52	L
Middle Occipital Gyrus	T = 15.49	-44	-78	-10	L
Cluster2: 556					
Precentral Gyrus	T = 10.87	26	-4	50	R
Cluster 3: 405 voxels					
Superior Temporal Gyrus	T = 9.69	56	0	-8	R
Cluster 4: 215 voxels					
Superior Temporal Gyrus	T = 7.16	-56	-4	-2	L
Superior Temporal Gyrus	T = 5.65	-60	8	-8	L
Cluster5: 159 voxels					
Posterior-Medial Frontal	T = 6.71	-6	12	48	L
Cluster6: 36 voxels					
Precentral Gyrus	T = 6.78	44	2	30	R
Cluster 7: 23 voxels					
Superior Temporal Gyrus	T = 5.61	-68	-18	4	L
Superior Temporal Gyrus	T = 5.42	-68	-14	2	L
Cluster 8: 8 voxels					
Thalamus	T = 5.39	-24	-26	-2	L

Scatterplots for correlations between rating scores and brain activity

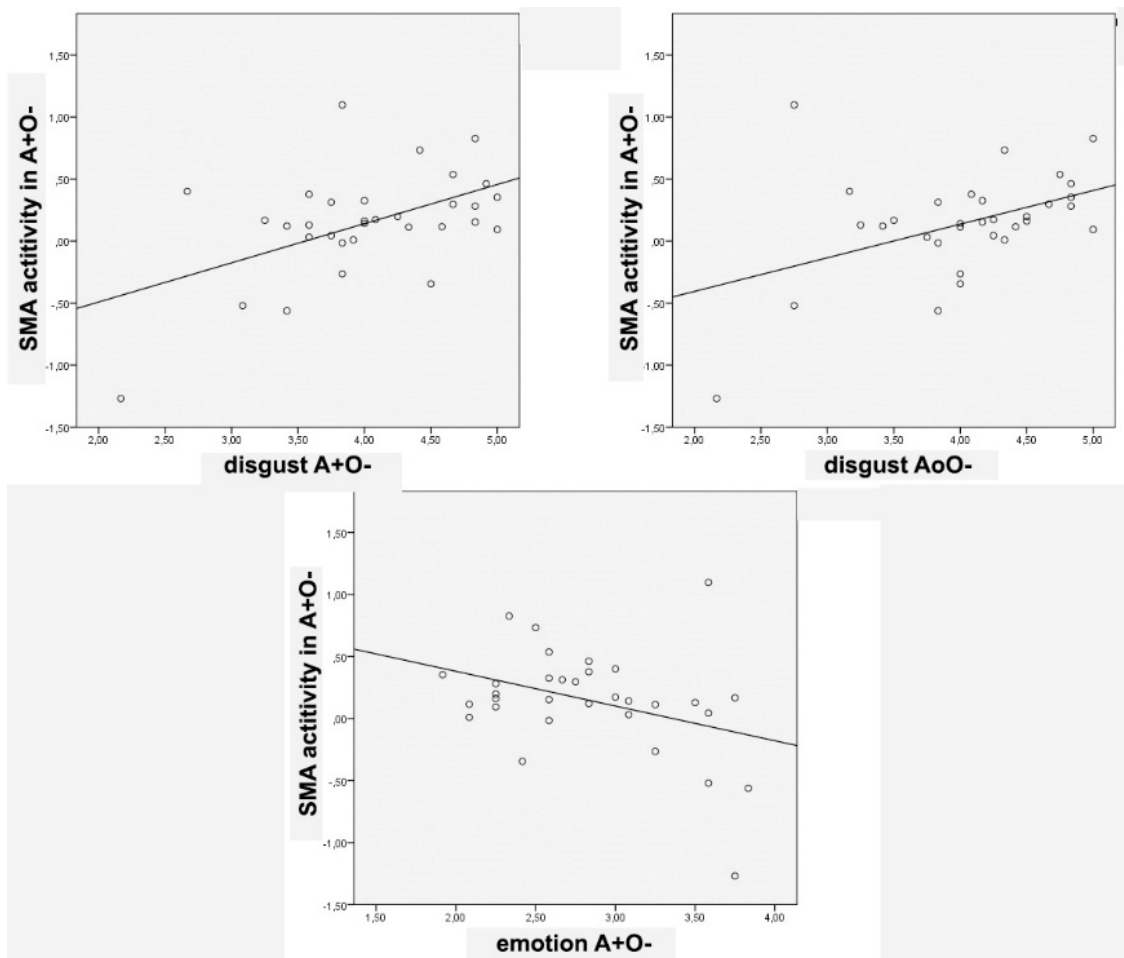


Figure 1: SMA activity was correlated with three rating scores: in A⁺O⁻ for the disgust rating ($r = 0.509$; $p = 0.003$) and the emotional state rating ($r = -0.362$; $p = 0.043$) and in A⁰O⁻ for the disgust rating ($r = 0.435$; $p = 0.01$).

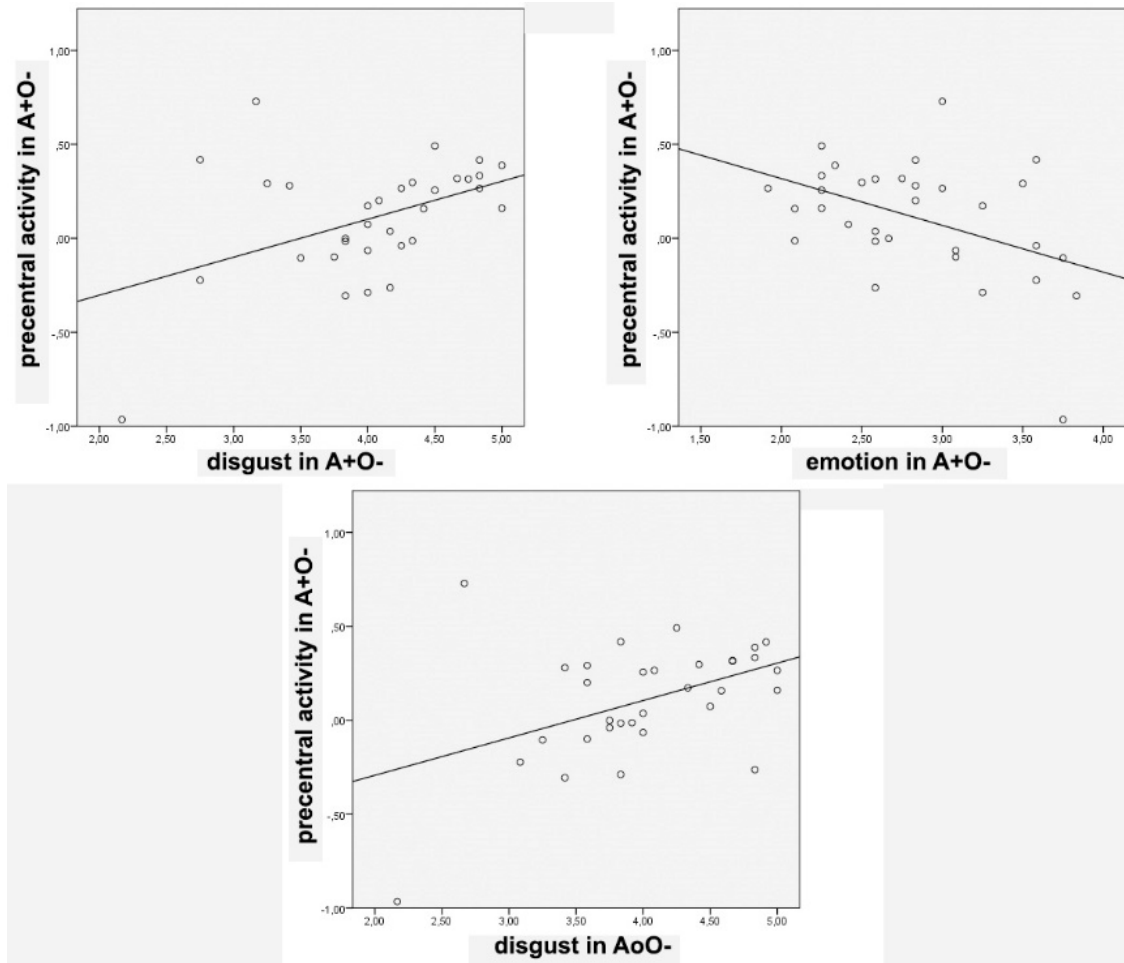


Figure 2: precentral activity was also correlated with three ratings scores: in A+O- for the disgust rating ($r = 0.443$; $p = 0.011$), the emotional state rating ($r = -0.439$; $p = 0.012$) and A⁰O- for the disgust rating ($r = 0.437$; $p = 0.012$).

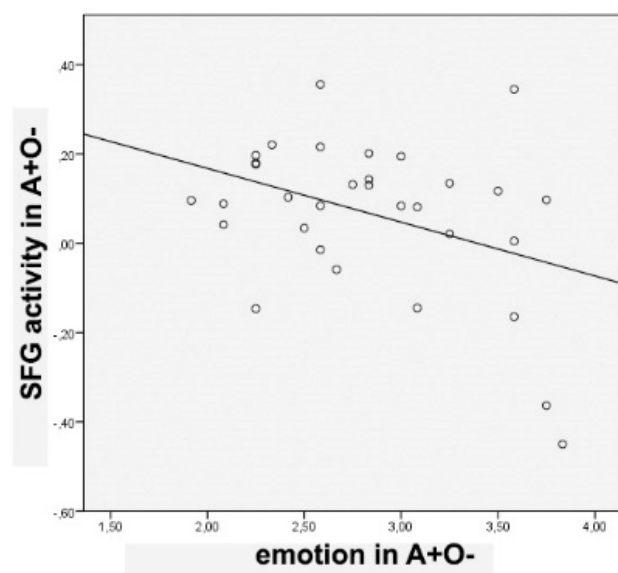


Figure 3: Activity in the SFG was correlated with the emotional state rating in A+O- ($r = -0.384$; $p = 0.03$)

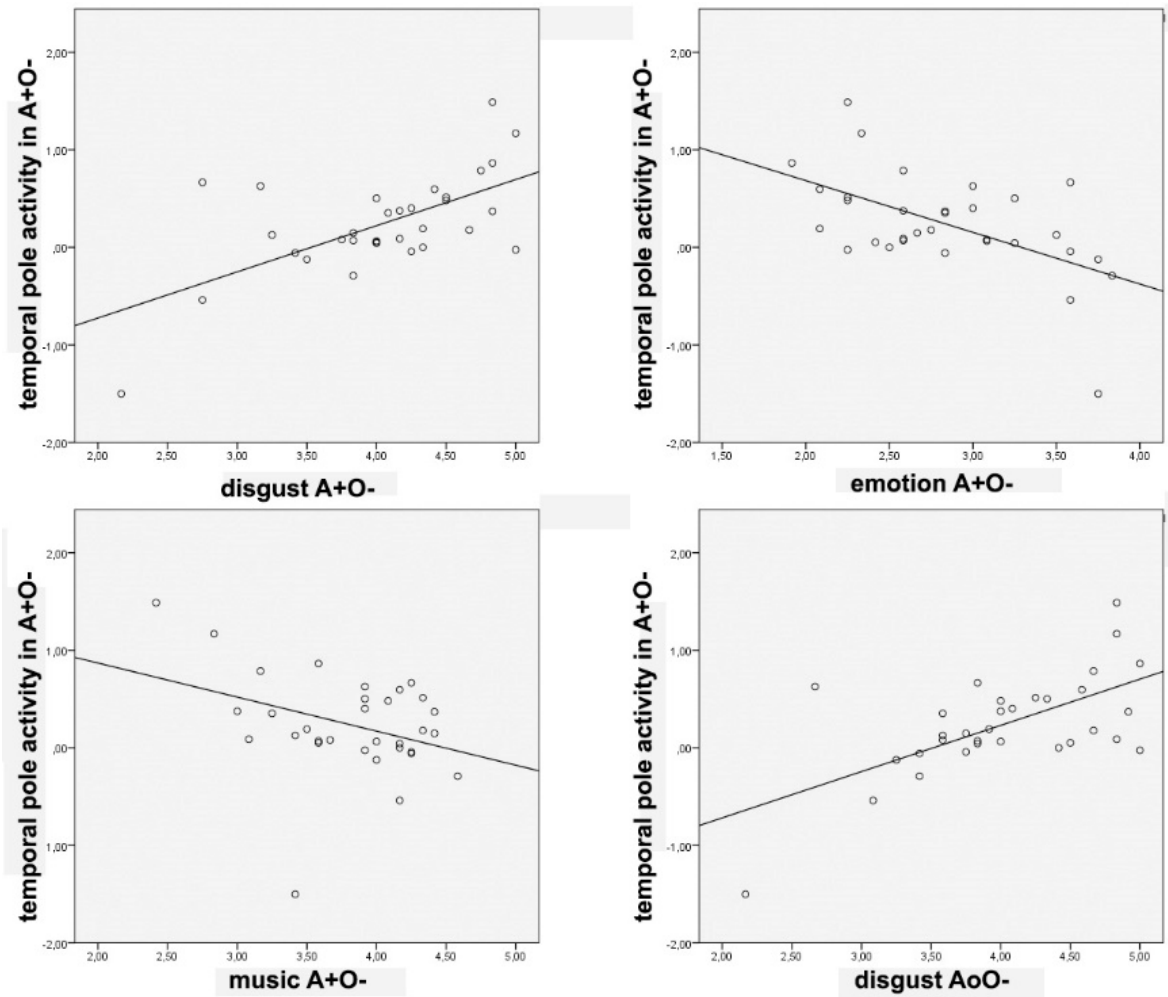


Figure 4: Temporal pole activity was correlated with four ratings: in A+O- with the disgust rating ($r = 0.624$; $p < 0.0001^*$), the music rating ($r = 0.352$; $p = 0.048$), and the rating of emotional state ($r = 0.563$; $p < 0.001^*$). In A0O- we observed a significant correlation with the disgust rating ($r = 0.627$; $p < 0.001^*$).