

S.2A. All Subjects Region of Interest Correlation Coefficients: Auditory Mirror Neuron System fMRI Study

		Cognitive ROIs													
		Superior frontal gyrus		Medial frontal gyrus		Middle frontal gyrus		Inferior frontal gyrus		Anterior cingulate gyrus		Cingulate gyrus		Posterior cingulate gyrus	
		R	L	R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.044	-.131	-.215	-.229	-.026	-.138	-.141	-.218	-.418	-.365	-.026	-.006	-.150	-.065
	p-value	.871	.629	.425	.393	.922	.610	.602	.418	.107	.165	.922	.983	.579	.812
Verbal IQ	ρ	.065	-.071	-.241	-.206	.038	-.112	-.144	-.209	-.468	-.324	.006	.021	-.212	-.079
	p-value	.812	.795	.368	.444	.888	.680	.594	.438	.068	.222	.983	.940	.431	.770
NonVerbal IQ	ρ	.047	-.044	-.130	-.103	-.027	-.028	-.038	-.087	-.368	-.258	-.113	.021	-.065	.028
	p-value	.862	.871	.632	.704	.922	.918	.888	.749	.160	.335	.676	.940	.811	.918

		Task-specific ROIs													
		Fusiform gyrus		Precuneus		Inferior parietal lobe		Post-central gyrus		Superior temporal gyrus		Middle temporal gyrus		Transverse temporal gyrus	
		R	L	R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.047	-.179	.450	.279	.194	.097	-.091	-.206	-.012	-.344	.082	-.403	.103	-.176
	p-value	.863	.506	.080	.295	.471	.721	.737	.444	.966	.192	.762	.122	.704	.513
Verbal IQ	ρ	.100	-.097	.456	.344	.162	.065	-.009	-.032	-.156	-.462	.044	-.397	.135	-.235
	p-value	.713	.721	.076	.192	.549	.812	.974	.905	.564	.072	.871	.128	.617	.380
NonVerbal IQ	ρ	.065	-.085	.416	.321	.211	.187	-.119	-.218	.152	-.139	.103	-.223	.124	-.059
	p-value	.811	.753	.109	.225	.433	.488	.660	.417	.575	.609	.704	.407	.648	.828

S.2B. All Subjects Region of Interest Correlation Coefficients: Music-Noise fMRI Study

		Cognitive ROIs													
		Superior frontal gyrus		Medial frontal gyrus		Middle frontal gyrus		Inferior frontal gyrus		Anterior cingulate gyrus		Cingulate gyrus		Posterior cingulate gyrus	
		R	L	R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	-.415	-.508	-.200	-.027	-.642	-.390	-.273	-.046	.029	-.231	-.100	-.091	-.182	-.063
	p-value	.124	.053	.474	.924	.010	.151	.324	.869	.919	.408	.723	.747	.516	.825
Verbal IQ	ρ	-.268	-.461	-.107	.068	-.568	-.264	-.143	.082	.125	-.175	-.018	-.064	-.175	-.125
	p-value	.334	.084	.704	.810	.027	.341	.612	.771	.657	.533	.950	.820	.533	.657
NonVerbal IQ	ρ	-.451	-.513	-.166	-.088	-.610	-.399	-.208	-.093	.045	-.272	-.011	-.005	-.066	.027
	p-value	.092	.050	.553	.756	.016	.141	.458	.742	.874	.327	.970	.985	.815	.924

		Task-specific ROIs									
		Cuneus		Lingual gyrus		Insular cortex		Superior temporal gyrus		Middle temporal gyrus	
		R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.186	.130	.197	.007	-.206	-.088	.157	-.032	-.150	-.320
	p-value	.507	.643	.482	.980	.462	.756	.576	.909	.593	.245
Verbal IQ	ρ	.218	.168	.171	-.032	-.182	-.011	.011	-.139	-.136	-.377
	p-value	.435	.550	.541	.909	.516	.970	.970	.621	.630	.166
NonVerbal IQ	ρ	.159	.102	.204	-.005	-.163	-.025	.220	.048	-.079	-.270
	p-value	.571	.718	.466	.985	.562	.929	.431	.864	.780	.330

S.2C. All Subjects Region of Interest Correlation Coefficients: Faces fMRI Study

		Cognitive ROIs													
		Superior frontal gyrus		Medial frontal gyrus		Middle frontal gyrus		Inferior frontal gyrus		Anterior cingulate gyrus		Cingulate gyrus		Posterior cingulate gyrus	
		R	L	R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.385	.321	.515	.515	.385	.387	.700	.481	.728	.614	.512	.368	.570	.224
	p-value	.195	.285	.072	.072	.195	.191	.008	.096	.005	.026	.074	.216	.042	.462
Verbal IQ	ρ	.285	.255	.434	.418	.337	.310	.600	.432	.667	.562	.495	.296	.454	.122
	p-value	.345	.401	.138	.156	.259	.303	.030	.141	.013	.046	.085	.326	.119	.692
NonVerbal IQ	ρ	.426	.382	.542	.517	.344	.360	.635	.476	.735	.663	.440	.358	.443	.336
	p-value	.146	.197	.056	.070	.250	.226	.020	.100	.004	.014	.132	.230	.130	.262

		Task-specific ROIs											
		Parahippocampal gyrus		Amygdala		Cuneus		Lingual gyrus		Fusiform gyrus		Insular cortex	
		R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.656	.382	.409	.047	.152	-.094	.205	.332	.490	.365	.550	.664
	p-value	.015	.198	.165	.879	.620	.760	.502	.268	.089	.220	.051	.013
Verbal IQ	ρ	.523	.243	.282	-.030	.172	-.169	.180	.210	.418	.307	.429	.575
	p-value	.067	.423	.350	.921	.575	.582	.557	.491	.156	.307	.144	.040
NonVerbal IQ	ρ	.534	.209	.248	-.116	.151	.083	.201	.520	.319	.234	.619	.746
	p-value	.060	.493	.415	.707	.622	.789	.511	.069	.288	.442	.024	.003

S.2D. All Subjects Region of Interest Correlation Coefficients: Images fMRI Study

		Cognitive ROIs													
		Superior frontal gyrus		Medial frontal gyrus		Middle frontal gyrus		Inferior frontal gyrus		Anterior cingulate gyrus		Cingulate gyrus		Posterior cingulate gyrus	
		R	L	R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.176	.035	.317	.183	.148	.109	.138	.247	.000	.166	.522	.282	.466	.173
	p-value	.583	.913	.315	.568	.646	.735	.670	.439	1.000	.607	.082	.374	.127	.591
Verbal IQ	ρ	.148	.049	.293	.250	.141	.123	.226	.194	.046	.212	.452	.176	.374	.176
	p-value	.646	.879	.356	.432	.662	.702	.480	.546	.887	.509	.141	.583	.231	.583
NonVerbal IQ	ρ	.077	-.084	.217	.102	.011	-.056	-.081	.256	-.049	.116	.420	.329	.385	.245
	p-value	.812	.795	.498	.753	.974	.863	.803	.422	.880	.721	.174	.296	.216	.442

		Task-specific ROIs											
		Parahippocampal gyrus		Amygdala		Cuneus		Lingual gyrus		Fusiform gyrus		Insular cortex	
		R	L	R	L	R	L	R	L	R	L	R	L
IQ Composite	ρ	.684	.575	.212	.448	.229	.028	.282	.444	.727	.614	.236	.212
	p-value	.014	.050	.509	.144	.473	.931	.374	.148	.007	.034	.460	.509
Verbal IQ	ρ	.642	.582	.286	.515	.198	-.007	.236	.363	.734	.561	.215	.183
	p-value	.024	.047	.368	.087	.538	.983	.460	.246	.007	.058	.502	.568
NonVerbal IQ	ρ	.508	.371	.011	.228	.165	-.095	.189	.385	.602	.543	.186	.123
	p-value	.092	.235	.974	.477	.609	.770	.556	.216	.038	.068	.564	.704