

Supplementary Materials

Table S1. Mixed Effects for HF volumetric maturity predicting LGI

Effect	<i>b</i>	Std. Err	<i>z</i>	<i>P</i> > <i>z</i>	CI 95%	
intercept	0.104	0.137	0.755	0.450	-0.165	0.373
valence[T.Negative]	0.152	0.024	6.247	0.000	0.104	0.200
valence[T.Positive]	0.021	0.024	0.852	0.394	-0.027	0.068
gender[T.Male]	-0.028	0.043	-0.664	0.507	-0.112	0.055
condition[T.Wake]	-0.057	0.043	-1.313	0.189	-0.141	0.028
HF volume maturity	-0.009	0.013	-0.698	0.485	-0.033	0.016
HF volume maturity:valence[T.Negative]	0.037	0.012	3.074	0.002	0.014	0.061
HF volume maturity:valence[T.Positive]	0.021	0.012	1.747	0.081	-0.003	0.045
age (months)	0.001	0.001	1.195	0.232	-0.001	0.003
pars	0.003	0.003	1.054	0.292	-0.002	0.008

Table S2. Mixed Effects for amy volumetric maturity predicting LGI

Effect	<i>b</i>	Std. Err	<i>z</i>	<i>P</i> > <i>z</i>	CI 95%	
intercept	0.059	0.133	0.441	0.659	-0.202	0.319
valence[T.Negative]	0.152	0.025	6.018	0.000	0.102	0.201
valence[T.Positive]	0.021	0.025	0.821	0.412	-0.029	0.070
gender[T.Male]	-0.003	0.045	-0.072	0.943	-0.092	0.086
condition[T.Wake]	-0.065	0.042	-1.540	0.124	-0.147	0.018
amy volume maturity	0.032	0.018	1.799	0.072	-0.003	0.068
amy volume maturity:valence[T.Negative]	0.001	0.017	0.087	0.931	-0.032	0.035
amy volume maturity:valence[T.Positive]	-0.029	0.017	-1.733	0.083	-0.063	0.004
age (months)	0.001	0.001	1.467	0.142	-0.000	0.003
pars	0.004	0.003	1.476	0.140	-0.001	0.009

Table S3. Mixed Effects for rhinal volumetric maturity predicting LGI

Effect	<i>b</i>	Std. Err	<i>z</i>	<i>P</i> > <i>z</i>	CI 95%	
intercept	0.078	0.136	0.569	0.569	-0.190	0.345
valence[T.Negative]	0.152	0.024	6.280	0.000	0.104	0.199
valence[T.Positive]	0.021	0.024	0.857	0.392	-0.027	0.068
gender[T.Male]	-0.021	0.045	-0.476	0.634	-0.110	0.067
condition[T.Wake]	-0.068	0.044	-1.542	0.123	-0.153	0.018
rhinal volume maturity	0.023	0.021	1.104	0.270	-0.018	0.065
rhinal volume maturity:valence[T.Negative]	-0.051	0.019	-2.637	0.008	-0.089	0.013
rhinal volume maturity:valence[T.Positive]	-0.056	0.019	-2.902	0.004	-0.094	0.018
age (months)	0.001	0.001	1.458	0.145	-0.000	0.003
pars	0.003	0.003	0.934	0.350	-0.003	0.008

Table S4. Mixed effects for amy-HF connectivity maturity predicting LGI

Effect	<i>b</i>	Std. Err	z	<i>P</i> > z	CI 95%	
intercept	0.075	0.127	0.589	0.556	-0.174	0.323
valence[T.Negative]	0.152	0.026	5.859	0.000	0.101	0.203
valence[T.Positive]	0.021	0.026	0.799	0.424	-0.030	0.072
gender[T.Male]	-0.038	0.040	-0.939	0.348	-0.116	0.041
condition[T.Wake]	-0.054	0.040	-1.350	0.177	-0.133	0.025
<i>amy</i> → <i>HF</i> maturity	0.031	0.015	2.104	0.035	0.002	0.060
<i>amy</i> → <i>HF</i> maturity:valence[T.Negative]	-0.003	0.016	-0.169	0.866	-0.033	0.028
<i>amy</i> → <i>HF</i> maturity:valence[T.Positive]	-0.012	0.016	-0.772	0.440	-0.043	0.019
age (months)	0.001	0.001	1.596	0.110	-0.000	0.003
pars	0.003	0.003	1.083	0.279	-0.002	0.008

Table S5. Mixed effects for HF-rhinal connectivity maturity predicting LGI

Effect	<i>b</i>	Std. Err	<i>z</i>	<i>P</i> > <i>z</i>	CI 95%	
intercept	0.098	0.139	0.709	0.478	-0.173	0.370
valence[T.Negative]	0.152	0.025	6.110	0.000	0.103	0.201
valence[T.Positive]	0.021	0.025	0.834	0.404	-0.028	0.069
gender[T.Male]	-0.030	0.043	-0.701	0.483	-0.114	0.054
condition[T.Wake]	-0.072	0.045	-1.606	0.108	-0.160	0.016
<i>HF</i> → <i>rhinal</i> maturity	0.011	0.020	0.535	0.593	-0.029	0.051
<i>HF</i> → <i>rhinal</i> maturity:valence[T.Negative]	0.028	0.019	1.445	0.148	-0.010	0.066
<i>HF</i> → <i>rhinal</i> maturity:valence[T.Positive]	-0.021	0.019	-1.062	0.288	-0.059	0.017
age (months)	0.001	0.001	1.304	0.192	-0.001	0.003
pars	0.003	0.003	1.095	0.274	-0.002	0.008

Table S6. Mixed effects for HF-mpfc connectivity maturity predicting LGI

Effect	<i>b</i>	Std. Err	<i>z</i>	<i>P</i> > <i>z</i>	CI 95%	
intercept	0.084	0.137	0.616	0.538	-0.184	0.353
valence[T.Negative]	0.152	0.025	6.139	0.000	0.103	0.200
valence[T.Positive]	0.021	0.025	0.838	0.402	-0.028	0.069
gender[T.Male]	-0.030	0.043	-0.708	0.479	-0.115	0.054
condition[T.Wake]	-0.068	0.044	-1.538	0.124	-0.154	0.019
<i>HF</i> → <i>mpfc</i> maturity	-0.004	0.012	-0.375	0.708	-0.027	0.018
<i>HF</i> → <i>mpfc</i> maturity:valence[T.Negative]	0.027	0.011	2.432	0.015	0.005	0.049
<i>HF</i> → <i>mpfc</i> maturity:valence[T.Positive]	0.004	0.011	0.316	0.752	-0.018	0.026
age (months)	0.001	0.001	1.412	0.158	-0.000	0.003
pars	0.003	0.003	1.084	0.278	-0.002	0.008

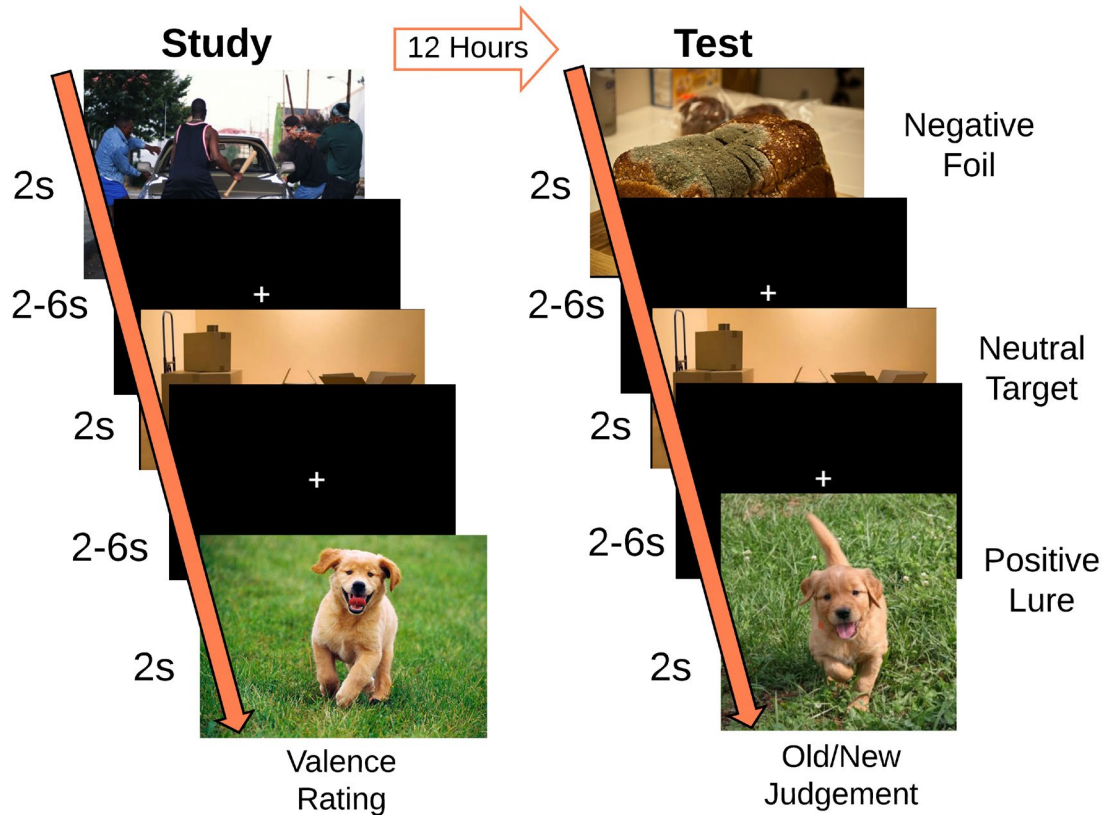


Figure S1. Trial structure of emotional similarity task. Participants experienced two scanning sessions. The Study session consisted of 145 images of differing valences while the Testing session consisted of a recognition memory task comprised of 284 images across the three valences with Targets (presented during the Study session), Foils (new images), and Lures (stimuli similar to the items presented during the Study session).

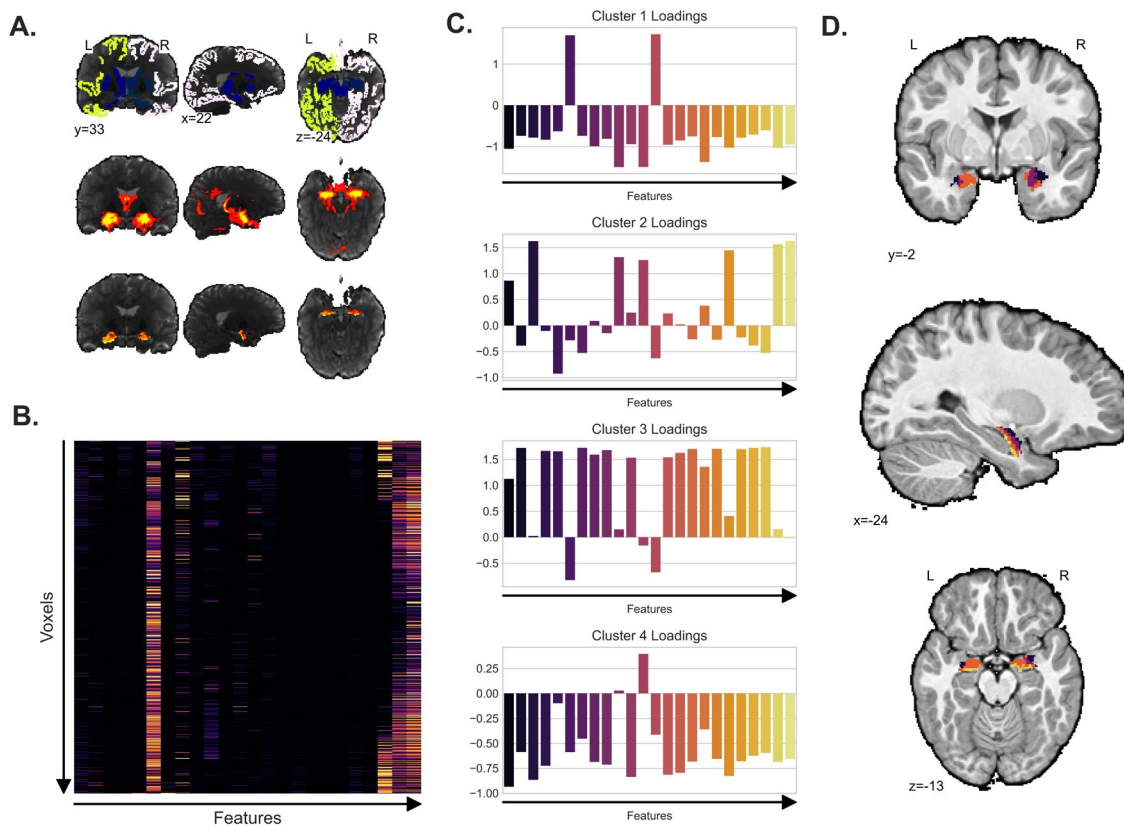


Figure S2. Delineation of the Amygdala through k-means clustering. (A) Probabilistic Tractography from the amygdala to 26 ipsilateral cortical and subcortical targets (first row) allowed for the definition of fiber pathways (second row) which allowed for the construction of metrics of anatomical connectivity in the form of number of walks to the target (third row; pictured is the number of successful walks from the amygdala to the HF). (B) From the random walk data, a matrix of number of random walks from amygdala to target was constructed across voxels in the amygdala. (C) The correlation matrix was then placed into a k-means clustering algorithm implemented in 'scipy' set to sort the data into 4 clusters, with cluster loadings pictured. (D). These four clusters were then classed for each participant, with an exemplar pictured.