

Table 1. Regional Surface Area Measures Adjusted for Age and Site: Parameter Estimates under Bivariate Models (AE Influences on Total Surface Area and Either ACE or AE Influences on Regional Surface Area) and Tests of Submodels

Region of Interest	Model Comparisons														
	Parameter Estimates								Against Model with			Parameter Estimates with A			
	rMZ	rDZ	with A, C, and E Influences on Region					A, C, and E Influences on Region			and E Influences on Region				
	A	95% CI	C	95% CI	E	95% CI	no A ¹	no C ²	no AC ³	A	95% CI	E	95% CI		
<i>Frontal lobe</i>															
Superior frontal gyrus-L	0.79	0.45	0.79	(0.64; 0.84)	0.00	(0; 0.11)	0.21	(0.16; 0.28)	<0.0001	1.00	<0.0001	0.79	(0.72; 0.84)	0.21	(0.16; 0.28)
Superior frontal gyrus-R	0.77	0.48	0.73	(0.63; 0.83)	0.05	(0; 0.12)	0.22	(0.16; 0.29)	<0.0001	0.36	<0.0001	0.79	(0.72; 0.84)	0.21	(0.16; 0.28)
<i>Middle frontal gyrus</i>															
Rostral division-L	0.61	0.26	0.59	(0.43; 0.69)	0.00	(0; 0.11)	0.41	(0.31; 0.52)	<0.0001	1.00	<0.0001	0.59	(0.48; 0.69)	0.41	(0.31; 0.52)
Rostral division-R	0.58	0.45	0.57	(0.41; 0.67)	0.00	(0; 0.12)	0.43	(0.33; 0.54)	<0.0001	1.00	<0.0001	0.57	(0.46; 0.67)	0.43	(0.33; 0.54)
Caudal division-L	0.65	0.39	0.64	(0.37; 0.72)	0.00	(0; 0.21)	0.36	(0.28; 0.47)	<0.0001	1.00	<0.0001	0.64	(0.53; 0.72)	0.36	(0.28; 0.47)
Caudal division-R	0.59	0.21	0.55	(0.4; 0.65)	0.00	(0; 0.1)	0.45	(0.35; 0.57)	<0.0001	1.00	<0.0001	0.55	(0.43; 0.65)	0.45	(0.35; 0.57)
<i>Inferior frontal gyrus</i>															
Pars opercularis-L	0.47	0.15	0.45	(0.2; 0.57)	0.00	(0; 0.22)	0.55	(0.43; 0.68)	<0.0001	1.00	<0.0001	0.45	(0.32; 0.57)	0.55	(0.43; 0.68)
Pars opercularis-R	0.48	0.19	0.47	(0.25; 0.58)	0.00	(0; 0.18)	0.53	(0.42; 0.67)	<0.0001	1.00	<0.0001	0.47	(0.33; 0.58)	0.53	(0.42; 0.67)
Pars triangularis-L	0.40	0.13	0.38	(0.16; 0.51)	0.00	(0; 0.18)	0.62	(0.49; 0.77)	<0.0001	1.00	<0.0001	0.38	(0.23; 0.51)	0.62	(0.49; 0.77)
Pars triangularis-R	0.35	0.06	0.33	(0.08; 0.48)	0.00	(0; 0.18)	0.67	(0.52; 0.84)	<0.0001	1.00	<0.0001	0.33	(0.16; 0.48)	0.67	(0.52; 0.84)
Pars orbitalis-L	0.21	0.00	0.23	(0.15; 0.36)	0.00	(0; 0.08)	0.77	(0.64; 0.85)	<0.0001	1.00	<0.0001	0.23	(0.15; 0.36)	0.77	(0.64; 0.85)

Pars orbitalis-R 0.45 0.01 **0.38** (0.24; 0.51) **0.00** (0; 0.11) **0.62** (0.49; 0.76) <0.0001 1.00 <0.0001 **0.38** (0.24; 0.51) **0.62** (0.49; 0.76)

Orbitofrontal cortex

Lateral division-L 0.56 0.17 **0.53** (0.32; 0.64) **0.00** (0; 0.16) **0.47** (0.36; 0.61) <0.0001 1.00 <0.0001 **0.53** (0.39; 0.64) **0.47** (0.36; 0.61)

Lateral division-R 0.42 0.11 **0.36** (0.23; 0.49) **0.00** (0; 0.13) **0.64** (0.51; 0.76) <0.0001 1.00 <0.0001 **0.36** (0.24; 0.49) **0.64** (0.51; 0.76)

Medial division-L 0.37 0.13 **0.33** (0.19; 0.47) **0.00** (0; 0.12) **0.67** (0.53; 0.81) <0.0001 1.00 <0.0001 **0.33** (0.19; 0.47) **0.67** (0.53; 0.81)

Medial division-R* 0.40 0.29 **0.32** (0.21; 0.56) **0.11** (0; 0.22) **0.57** (0.44; 0.7) <0.0001 0.43 <0.0001 **0.45** (0.31; 0.57) **0.55** (0.43; 0.69)

Frontal pole-L 0.14 0.11 **0.13** (0; 0.31) **0.02** (0; 0.24) **0.85** (0.69; 1) 0.4677 0.92 0.2347 **0.15** (0; 0.31) **0.85** (0.69; 1)

Frontal pole-R 0.00 0.01 **0.00** (0; 0.17) **0.00** (0; 0.14) **1.00** (0.83; 1) 0.6603 1.00 0.8423 **0** (0; 0.17) **1** (0.83; 1)

Precentral gyrus-L 0.67 0.45 **0.68** (0.47; 0.76) **0.00** (0; 0.16) **0.32** (0.24; 0.42) <0.0001 1.00 <0.0001 **0.68** (0.59; 0.76) **0.32** (0.24; 0.41)

Precentral gyrus-R* 0.61 0.37 **0.48** (0.4; 0.68) **0.14** (0; 0.21) **0.38** (0.3; 0.47) <0.0001 0.13 <0.0001 **0.63** (0.53; 0.71) **0.37** (0.29; 0.47)

Paracentral lobule-L* 0.44 0.22 **0.30** (0.22; 0.54) **0.11** (0; 0.2) **0.59** (0.46; 0.71) <0.0001 0.40 <0.0001 **0.43** (0.29; 0.55) **0.57** (0.45; 0.71)

Paracentral lobule-R* 0.53 0.36 **0.42** (0.32; 0.66) **0.14** (0; 0.23) **0.44** (0.34; 0.55) <0.0001 0.26 <0.0001 **0.58** (0.46; 0.67) **0.42** (0.33; 0.54)

Parietal lobe

Postcentral gyrus-L 0.55 0.29 **0.53** (0.4; 0.64) **0.00** (0; 0.08) **0.47** (0.36; 0.6) <0.0001 1.00 <0.0001 **0.53** (0.4; 0.64) **0.47** (0.36; 0.6)

Postcentral gyrus-R* 0.54 0.50 **0.43** (0.34; 0.62) **0.16** (0; 0.23) **0.41** (0.33; 0.51) <0.0001 0.06 <0.0001 **0.59** (0.49; 0.68) **0.41** (0.32; 0.51)

Supramarginal gyrus-L 0.60 0.31 **0.55** (0.38; 0.73) **0.09** (0; 0.22) **0.36** (0.27; 0.48) <0.0001 0.42 <0.0001 **0.65** (0.54; 0.73) **0.35** (0.27; 0.46)

Supramarginal gyrus-R 0.52 0.16 **0.49** (0.28; 0.61) **0.00** (0; 0.16) **0.51** (0.39; 0.64) <0.0001 1.00 <0.0001 **0.49** (0.36; 0.61) **0.51** (0.39; 0.64)

Superior parietal cortex-L 0.64 0.25 **0.61** (0.45; 0.7) **0.00** (0; 0.12) **0.39** (0.3; 0.5) <0.0001 1.00 <0.0001 **0.61** (0.5; 0.7) **0.39** (0.3; 0.5)

Superior parietal cortex-R 0.60 0.38 **0.57** (0.33; 0.71) **0.05** (0; 0.25) **0.38** (0.29; 0.49) <0.0001 0.68 <0.0001 **0.63** (0.52; 0.71) **0.37** (0.29; 0.48)

Inferior parietal cortex-L 0.48 0.13 **0.48** (0.32; 0.6) **0.00** (0; 0.12) **0.52** (0.4; 0.65) <0.0001 1.00 <0.0001 **0.48** (0.35; 0.6) **0.52** (0.4; 0.65)

Inferior parietal cortex-R 0.62 0.30 **0.65** (0.45; 0.73) **0.00** (0; 0.16) **0.35** (0.27; 0.45) <0.0001 1.00 <0.0001 **0.65** (0.55; 0.73) **0.35** (0.27; 0.45)

Precuneus-L	0.71	0.35	0.72 (0.57; 0.79)	0.00 (0; 0.11)	0.28 (0.21; 0.37)	<0.0001	1.00	<0.0001	0.72 (0.63; 0.79)	0.28 (0.21; 0.37)
Precuneus-R	0.56	0.36	0.51 (0.42; 0.68)	0.09 (0; 0.16)	0.40 (0.32; 0.5)	<0.0001	0.33	<0.0001	0.6 (0.5; 0.69)	0.4 (0.31; 0.5)

Occipital lobe

Lingual gyrus-L	0.51	0.30	0.53 (0.21; 0.64)	0.00 (0; 0.26)	0.47 (0.36; 0.6)	<0.0001	1.00	<0.0001	0.53 (0.41; 0.64)	0.47 (0.36; 0.6)
Lingual gyrus-R	0.49	0.31	0.47 (0.24; 0.58)	0.00 (0; 0.19)	0.53 (0.42; 0.66)	<0.0001	1.00	<0.0001	0.47 (0.34; 0.58)	0.53 (0.42; 0.66)
Pericalcarine cortex-L	0.35	0.14	0.34 (0.13; 0.48)	0.00 (0; 0.17)	0.66 (0.52; 0.82)	<0.0001	1.00	<0.0001	0.34 (0.18; 0.48)	0.66 (0.52; 0.82)
Pericalcarine cortex-R	0.46	0.17	0.44 (0.15; 0.56)	0.00 (0; 0.25)	0.56 (0.44; 0.7)	<0.0001	1.00	<0.0001	0.44 (0.3; 0.56)	0.56 (0.44; 0.7)
Cuneus-L	0.54	0.23	0.49 (0.16; 0.6)	0.00 (0; 0.28)	0.51 (0.4; 0.64)	<0.0001	1.00	<0.0001	0.49 (0.36; 0.6)	0.51 (0.4; 0.64)
Cuneus-R*	0.37	0.28	0.23 (0.15; 0.48)	0.14 (0; 0.24)	0.64 (0.52; 0.76)	<0.0001	0.28	<0.0001	0.37 (0.23; 0.5)	0.63 (0.5; 0.77)
Lateral occipital cortex-L*	0.56	0.41	0.46 (0.27; 0.67)	0.11 (0; 0.27)	0.43 (0.33; 0.55)	<0.0001	0.38	<0.0001	0.59 (0.47; 0.68)	0.41 (0.32; 0.53)
Lateral occipital cortex-R	0.32	0.38	0.32 (0.23; 0.53)	0.08 (0; 0.18)	0.60 (0.47; 0.72)	<0.0001	0.47	<0.0001	0.41 (0.27; 0.54)	0.59 (0.46; 0.73)

Temporal cortex

Lateral aspect

Superior temporal gyrus-L	0.55	0.19	0.56 (0.41; 0.66)	0.00 (0; 0.1)	0.44 (0.34; 0.56)	<0.0001	1.00	<0.0001	0.56 (0.44; 0.66)	0.44 (0.34; 0.56)
Superior temporal gyrus-R	0.56	0.22	0.57 (0.4; 0.67)	0.00 (0; 0.11)	0.43 (0.33; 0.56)	<0.0001	1.00	<0.0001	0.57 (0.44; 0.67)	0.43 (0.33; 0.56)
Middle temporal gyrus-L	0.45	0.21	0.38 (0.26; 0.57)	0.08 (0; 0.2)	0.54 (0.43; 0.67)	<0.0001	0.61	<0.0001	0.47 (0.33; 0.58)	0.53 (0.42; 0.67)
Middle temporal gyrus-R	0.54	0.22	0.49 (0.25; 0.64)	0.04 (0; 0.23)	0.48 (0.36; 0.62)	<0.0001	0.79	<0.0001	0.53 (0.4; 0.64)	0.47 (0.36; 0.6)
Inferior temporal gyrus-L	0.43	0.14	0.40 (0.19; 0.53)	0.00 (0; 0.16)	0.60 (0.47; 0.76)	<0.0001	1.00	<0.0001	0.4 (0.24; 0.53)	0.6 (0.47; 0.76)

Inferior temporal gyrus-R	0.46	0.19	0.45 (0.24; 0.57)	0.00 (0; 0.18)	0.55 (0.43; 0.69)	<0.0001	1.00	<0.0001	0.45 (0.31; 0.57)	0.55 (0.43; 0.69)
Transverse temporal cortex-L	0.41	0.08	0.39 (0.14; 0.51)	0.00 (0; 0.23)	0.61 (0.49; 0.76)	<0.0001	1.00	<0.0001	0.39 (0.24; 0.51)	0.61 (0.49; 0.76)
Transverse temporal cortex-R	0.27	0.07	0.26 (0.04; 0.41)	0.00 (0; 0.22)	0.74 (0.59; 0.91)	<0.0001	1.00	<0.0001	0.26 (0.09; 0.41)	0.74 (0.59; 0.91)
Banks Sup. Temp. Sulcus-L*	0.21	0.23	0.04 (0.01; 0.35)	0.15 (0; 0.28)	0.80 (0.65; 0.93)	0.0009	0.40	<0.0001	0 (0; 0.36)	0 (0; 0.94)
Banks Sup. Temp. Sulcus-R	0.16	0.11	0.18 (0.08; 0.34)	0.00 (0; 0.13)	0.82 (0.66; 0.92)	<0.0001	1.00	<0.0001	0.18 (0.08; 0.34)	0.82 (0.66; 0.92)

Medial aspect

Entorhinal cortex-L	0.18	0.07	0.16 (0.02; 0.33)	0.00 (0; 0.17)	0.84 (0.67; 0.97)	<0.0001	1.00	<0.0001	0.16 (0.03; 0.33)	0.84 (0.67; 0.97)
Entorhinal cortex-R	0.25	0.07	0.26 (0.03; 0.42)	0.00 (0; 0.22)	0.74 (0.58; 0.92)	<0.0001	1.00	<0.0001	0.26 (0.08; 0.42)	0.74 (0.58; 0.92)
Parahippocampal-L*	0.30	0.31	0.14 (0.07; 0.42)	0.23 (0; 0.34)	0.63 (0.51; 0.76)	<0.0001	0.05	<0.0001	0.39 (0.24; 0.52)	0.61 (0.48; 0.76)
Parahippocampal-R	0.28	0.10	0.19 (0.07; 0.36)	0.00 (0; 0.11)	0.81 (0.64; 0.93)	<0.0001	1.00	<0.0001	0.19 (0.07; 0.36)	0.81 (0.64; 0.93)
Temporal pole-L	0.12	0.13	0.09 (0.04; 0.27)	0.05 (0; 0.17)	0.86 (0.73; 0.96)	<0.0001	0.67	<0.0001	0.13 (0.04; 0.28)	0.87 (0.72; 0.96)
Temporal pole-R	0.24	0.06	0.23 (0.02; 0.4)	0.00 (0; 0.2)	0.77 (0.6; 0.96)	<0.0001	1.00	<0.0001	0.23 (0.04; 0.4)	0.77 (0.6; 0.96)
Fusiform gyrus-L	0.35	0.47	0.35 (0.27; 0.51)	0.09 (0; 0.18)	0.56 (0.46; 0.68)	<0.0001	0.16	<0.0001	0.43 (0.3; 0.54)	0.57 (0.46; 0.7)
Fusiform gyrus-R	0.45	0.22	0.48 (0.33; 0.59)	0.00 (0; 0.14)	0.52 (0.41; 0.64)	<0.0001	1.00	<0.0001	0.48 (0.36; 0.59)	0.52 (0.41; 0.64)

Cingulate cortex

Rostral anterior division-L	0.12	0.13	0.13 (0.07; 0.3)	0.04 (0; 0.16)	0.83 (0.7; 0.93)	<0.0001	0.50	<0.0001	0.15 (0.07; 0.3)	0.85 (0.7; 0.93)
Rostral anterior division-R	0.06	0.17	0.07 (0.02; 0.26)	0.06 (0; 0.19)	0.87 (0.73; 0.97)	<0.0001	0.53	<0.0001	0.12 (0.03; 0.27)	0.88 (0.73; 0.97)
Caudal anterior division-L	0.29	0.17	0.31 (0.16; 0.45)	0.00 (0; 0.14)	0.69 (0.55; 0.83)	<0.0001	1.00	<0.0001	0.31 (0.17; 0.45)	0.69 (0.55; 0.83)
Caudal anterior division-R	0.49	0.03	0.46 (0.24; 0.61)	0.00 (0; 0.12)	0.54 (0.39; 0.72)	<0.0001	1.00	<0.0001	0.46 (0.28; 0.61)	0.54 (0.39; 0.72)

Rostral posterior division-L	0.47	0.21	0.47 (0.25; 0.58)	0.00 (0; 0.2)	0.53 (0.42; 0.65)	<0.0001	1.00	<0.0001	0.47 (0.35; 0.58)	0.53 (0.42; 0.65)
Rostral posterior division-R*	0.50	0.30	0.40 (0.27; 0.62)	0.12 (0; 0.24)	0.48 (0.38; 0.6)	<0.0001	0.47	<0.0001	0.53 (0.41; 0.63)	0.47 (0.37; 0.59)
Retrosplenial cortex-L	0.53	0.24	0.54 (0.32; 0.65)	0.00 (0; 0.15)	0.46 (0.35; 0.59)	<0.0001	1.00	<0.0001	0.54 (0.41; 0.65)	0.46 (0.35; 0.59)
Retrosplenial cortex-R	0.35	0.24	0.40 (0.18; 0.53)	0.00 (0; 0.18)	0.60 (0.47; 0.77)	<0.0001	1.00	<0.0001	0.4 (0.24; 0.53)	0.6 (0.47; 0.76)

NOTE: rMZ = phenotypic correlation among monozygotic twins, rDZ = phenotypic correlation among dizygotic twins, A= additive genetic variance, C = shared environmental variance, E = unique environmental variance, CI = confidence interval, L = left, R = right

¹ Testing whether setting parameters a_{21} and a_{22} (see Figure 1) to zero significantly reduces model fit. A significant change in fit indicates that a model without genetic influences on the region provides a worse representation of the data, and provides a significance level for the heritability estimate.

² Testing whether setting parameters c_{21} and c_{22} to zero significantly reduces model fit. A significant change in fit indicates that a model without shared environmental influences on the region fits significantly worse.

³ Testing whether setting parameters a_{21} , a_{22} , c_{21} and c_{22} to zero significantly reduces model fit. A significant change in fit indicates that a model without genetic and shared environmental influences on the region fits significantly worse.

*Regions in which the shared environmental estimates are greater than 0.10, warranting caution in interpreting the A effects from an AE model as purely genetic in origin.

Table 2. Regional Surface Area Measures Adjusted for Age and Site and Total Surface Area: Residual Parameter Estimates from Bivariate ACE Model and Tests of Submodels

Region of Interest	Model Comparisons															
	rMZ rDZ		Residual Parameter Estimates Under Model with A, C, and E Influences on Region						Against Model with A, C, & E Influences on Region			Residual Parameter Estimates Under Model with A and E Influences on Region				
			A	95% CI	C	95% CI	E	95% CI	no A ¹	no C ²	no AC ³	A	95% CI	E	95% CI	
<i>Frontal lobe</i>																
Superior frontal gyrus-L	0.38	0.23	0.40	(0; 0.54)	0.00	(0; 0.37)	0.59	(0.46; 0.77)	0.10	1.00	<0.0001	0.41	(0.25; 0.54)	0.59	(0.46; 0.75)	
Superior frontal gyrus-R*	0.27	0.26	0.10	(0; 0.45)	0.19	(0; 0.39)	0.71	(0.55; 0.87)	0.70	0.36	0.001	0.32	(0.16; 0.47)	0.68	(0.53; 0.84)	
<i>Middle frontal gyrus</i>																
Rostral division-L	0.29	-0.02	0.24	(0; 0.4)	0.00	(0; 0.21)	0.76	(0.6; 0.94)	0.09	1.00	0.031	0.24	(0.06; 0.4)	0.76	(0.6; 0.94)	
Rostral division-R	0.18	0.05	0.17	(0; 0.33)	0.00	(0; 0.24)	0.83	(0.67; 1)	0.38	1.00	0.194	0.17	(0; 0.33)	0.83	(0.67; 1)	
Caudal division-L	0.43	0.18	0.41	(0; 0.54)	0.00	(0; 0.34)	0.59	(0.46; 0.75)	0.06	1.00	<0.0001	0.41	(0.26; 0.54)	0.59	(0.46; 0.74)	
Caudal division-R	0.26	-0.07	0.19	(0; 0.36)	0.00	(0; 0.18)	0.81	(0.64; 0.99)	0.11	1.00	0.108	0.19	(0.01; 0.36)	0.81	(0.64; 0.99)	
<i>Inferior frontal gyrus</i>																
Pars opercularis-L	0.29	0.09	0.27	(0; 0.42)	0.00	(0; 0.3)	0.73	(0.58; 0.9)	0.19	1.00	0.006	0.27	(0.11; 0.42)	0.73	(0.58; 0.89)	
Pars opercularis-R	0.22	0.09	0.21	(0; 0.37)	0.00	(0; 0.27)	0.79	(0.63; 0.96)	0.33	1.00	0.049	0.21	(0.04; 0.37)	0.79	(0.63; 0.96)	

Pars triangularis-L	0.28	-0.02	0.23	(0; 0.38)	0.00	(0; 0.24)	0.77	(0.62; 0.94)	0.13	1.00	0.028	0.23	(0.06; 0.38)	0.77	(0.62; 0.94)
Pars triangularis-R	0.30	0.01	0.27	(0; 0.43)	0.00	(0; 0.22)	0.73	(0.57; 0.91)	0.07	1.00	0.016	0.27	(0.09; 0.43)	0.73	(0.57; 0.91)
Pars orbitalis-L	0.01	-0.12	0.00	(0; 0.14)	0.00	(0; 0.1)	1.00	(0.86; 1)	1.00	1.00	1.000	0	(0; 0.14)	1	(0.86; 1)
Pars orbitalis-R	0.17	-0.07	0.10	(0; 0.27)	0.00	(0; 0.17)	0.90	(0.73; 1)	0.33	1.00	0.499	0.1	(0; 0.27)	0.9	(0.73; 1)

Orbitofrontal cortex

Lateral division-L	0.24	0.11	0.24	(0; 0.4)	0.00	(0; 0.27)	0.76	(0.6; 0.94)	0.24	1.00	0.029	0.24	(0.06; 0.4)	0.76	(0.6; 0.94)
Lateral division-R	0.11	-0.01	0.08	(0; 0.24)	0.00	(0; 0.19)	0.92	(0.76; 1)	0.60	1.00	0.644	0.08	(0; 0.24)	0.92	(0.76; 1)
Medial division-L	0.15	-0.06	0.10	(0; 0.27)	0.00	(0; 0.17)	0.90	(0.73; 1)	0.38	1.00	0.552	0.1	(0; 0.27)	0.9	(0.73; 1)
Medial division-R*	0.19	0.20	0.03	(0; 0.37)	0.17	(0; 0.32)	0.80	(0.63; 0.94)	0.89	0.43	0.024	0.23	(0.06; 0.39)	0.77	(0.61; 0.94)
Frontal pole-L	0.14	0.09	0.12	(0; 0.31)	0.02	(0; 0.24)	0.86	(0.69; 1)	0.65	0.92	0.250	0.15	(0; 0.31)	0.85	(0.69; 1)
Frontal pole-R	0.00	0.00	0.00	(0; 0.17)	0.00	(0; 0.14)	1.00	(0.83; 1)	1.00	1.00	1.000	0	(0; 0.17)	1	(0.83; 1)
Precentral gyrus-L	0.34	0.17	0.34	(0; 0.49)	0.00	(0; 0.33)	0.66	(0.51; 0.84)	0.13	1.00	0.001	0.34	(0.17; 0.49)	0.66	(0.51; 0.83)
Precentral gyrus-R*	0.29	0.28	0.00	(0; 0.38)	0.28	(0; 0.4)	0.72	(0.59; 0.85)	1.00	0.13	0.0003	0.3	(0.15; 0.43)	0.7	(0.57; 0.85)
Paracentral lobule-L*	0.14	0.18	0.00	(0; 0.34)	0.16	(0; 0.29)	0.84	(0.66; 0.97)	1.00	0.40	0.066	0.19	(0.02; 0.35)	0.81	(0.65; 0.98)
Paracentral lobule-R*	0.26	0.25	0.01	(0; 0.41)	0.24	(0; 0.37)	0.75	(0.58; 0.88)	1.00	0.26	0.002	0.29	(0.13; 0.43)	0.71	(0.57; 0.87)

Parietal lobe

Postcentral gyrus-L	0.14	-0.01	0.12	(0; 0.31)	0.00	(0; 0.18)	0.88	(0.69; 1)	0.40	1.00	0.538	0.12	(0; 0.31)	0.88	(0.69; 1)
Postcentral gyrus-R*	0.30	0.33	0.00	(0; 0.35)	0.31	(0; 0.43)	0.69	(0.57; 0.82)	1.00	0.06	<0.0001	0.32	(0.17; 0.45)	0.68	(0.55; 0.83)
Supramarginal gyrus-L*	0.29	0.27	0.15	(0; 0.48)	0.17	(0; 0.4)	0.68	(0.52; 0.85)	0.55	0.42	0.0003	0.35	(0.18; 0.49)	0.65	(0.51; 0.82)

Supramarginal gyrus-R	0.27	0.04	0.24	(0; 0.4)	0.00	(0; 0.25)	0.76	(0.6; 0.93)	0.13	1.00	0.024	0.24	(0.07; 0.4)	0.76	(0.6; 0.93)
Superior parietal cortex-L	0.45	0.03	0.38	(0.13; 0.52)	0.00	(0; 0.2)	0.62	(0.48; 0.77)	0.01	1.00	<0.0001	0.38	(0.23; 0.52)	0.62	(0.48; 0.77)
Superior parietal cortex-R	0.41	0.23	0.31	(0; 0.53)	0.09	(0; 0.42)	0.60	(0.47; 0.77)	0.21	0.68	<0.0001	0.41	(0.26; 0.53)	0.59	(0.47; 0.74)
Inferior parietal cortex-L	0.23	-0.05	0.17	(0; 0.33)	0.00	(0; 0.2)	0.83	(0.67; 1)	0.19	1.00	0.149	0.17	(0; 0.33)	0.83	(0.67; 1)
Inferior parietal cortex-R	0.36	0.11	0.31	(0; 0.45)	0.00	(0; 0.34)	0.69	(0.55; 0.85)	0.18	1.00	0.001	0.31	(0.16; 0.45)	0.69	(0.55; 0.84)
Precuneus-L	0.46	0.16	0.46	(0.17; 0.59)	0.00	(0; 0.21)	0.54	(0.41; 0.7)	0.01	1.00	<0.0001	0.46	(0.3; 0.59)	0.54	(0.41; 0.7)
Precuneus-R*	0.22	0.17	0.00	(0; 0.33)	0.20	(0; 0.33)	0.80	(0.66; 0.93)	1.00	0.33	0.016	0.21	(0.06; 0.35)	0.79	(0.65; 0.94)

Occipital lobe

Lingual gyrus-L	0.39	0.17	0.38	(0; 0.51)	0.00	(0; 0.36)	0.62	(0.49; 0.78)	0.10	1.00	<0.0001	0.38	(0.23; 0.51)	0.62	(0.49; 0.77)
Lingual gyrus-R	0.26	0.06	0.23	(0; 0.38)	0.00	(0; 0.28)	0.77	(0.62; 0.93)	0.22	1.00	0.023	0.23	(0.07; 0.38)	0.77	(0.62; 0.93)
Pericalcarine cortex-L	0.21	0.03	0.18	(0; 0.35)	0.00	(0; 0.22)	0.82	(0.65; 0.99)	0.23	1.00	0.124	0.18	(0.01; 0.35)	0.82	(0.65; 0.99)
Pericalcarine cortex-R	0.37	0.09	0.33	(0; 0.47)	0.00	(0; 0.31)	0.67	(0.53; 0.83)	0.08	1.00	0.000	0.33	(0.17; 0.47)	0.67	(0.53; 0.83)
Cuneus-L	0.38	0.14	0.36	(0; 0.5)	0.00	(0; 0.36)	0.64	(0.5; 0.81)	0.12	1.00	0.000	0.36	(0.2; 0.5)	0.64	(0.5; 0.8)
Cuneus-R*	0.17	0.20	0.00	(0; 0.32)	0.18	(0; 0.31)	0.82	(0.68; 0.96)	1.00	0.28	0.035	0.19	(0.03; 0.34)	0.81	(0.66; 0.97)
Lateral occipital cortex-L*	0.39	0.26	0.16	(0; 0.49)	0.19	(0; 0.43)	0.64	(0.5; 0.8)	0.50	0.38	<0.0001	0.38	(0.23; 0.51)	0.62	(0.49; 0.77)
Lateral occipital cortex-R*	0.11	0.15	0.00	(0; 0.29)	0.12	(0; 0.26)	0.88	(0.71; 1)	1.00	0.47	0.210	0.14	(0; 0.31)	0.86	(0.69; 1)

Temporal cortex

Lateral aspect

Superior temporal gyrus-L	0.24	-0.03	0.18	(0; 0.34)	0.00	(0; 0.21)	0.82	(0.66; 0.99)	0.18	1.00	0.120	0.18	(0.01; 0.34)	0.82	(0.66; 0.99)
Superior temporal gyrus-R	0.23	0.01	0.20	(0; 0.37)	0.00	(0; 0.22)	0.80	(0.63; 0.98)	0.16	1.00	0.083	0.2	(0.02; 0.37)	0.8	(0.63; 0.98)
Middle temporal gyrus-L*	0.20	0.14	0.06	(0; 0.34)	0.12	(0; 0.3)	0.82	(0.66; 0.97)	0.82	0.61	0.052	0.2	(0.03; 0.34)	0.81	(0.66; 0.97)
Middle temporal gyrus-R	0.26	0.19	0.24	(0; 0.45)	0.06	(0; 0.34)	0.71	(0.55; 0.89)	0.37	0.79	0.004	0.3	(0.13; 0.45)	0.7	(0.55; 0.87)
Inferior temporal gyrus-L	0.23	0.02	0.20	(0; 0.37)	0.00	(0; 0.21)	0.80	(0.63; 0.98)	0.16	1.00	0.099	0.2	(0.02; 0.37)	0.8	(0.63; 0.98)
Inferior temporal gyrus-R	0.22	0.10	0.22	(0; 0.38)	0.00	(0; 0.27)	0.78	(0.62; 0.96)	0.29	1.00	0.048	0.22	(0.05; 0.38)	0.78	(0.62; 0.95)
Transverse temporal cortex-L	0.29	0.03	0.24	(0; 0.39)	0.00	(0; 0.28)	0.76	(0.61; 0.91)	0.17	1.00	0.011	0.24	(0.09; 0.39)	0.76	(0.61; 0.91)
Transverse temporal cortex-R	0.25	0.04	0.21	(0; 0.37)	0.00	(0; 0.25)	0.79	(0.63; 0.97)	0.22	1.00	0.068	0.21	(0.03; 0.37)	0.79	(0.63; 0.97)
Banks Sup. Temp. Sulcus-L*	0.16	0.17	0.00	(0; 0.32)	0.16	(0; 0.29)	0.84	(0.68; 0.98)	1.00	0.40	0.070	0	(0; 0.34)	0	(0; 0.98)
Banks Sup. Temp. Sulcus-R	0.07	-0.04	0.04	(0; 0.21)	0.00	(0; 0.15)	0.96	(0.79; 1)	0.66	1.00	0.878	0.04	(0; 0.21)	0.96	(0.79; 1)

Medial aspect

Entorhinal cortex-L	0.14	-0.02	0.11	(0; 0.29)	0.00	(0; 0.18)	0.89	(0.71; 1)	0.41	1.00	0.525	0.11	(0; 0.29)	0.89	(0.71; 1)
Entorhinal cortex-R	0.22	0.05	0.21	(0; 0.37)	0.00	(0; 0.24)	0.79	(0.63; 0.98)	0.22	1.00	0.080	0.21	(0.03; 0.37)	0.79	(0.63; 0.97)
Parahippocampal-L*	0.21	0.36	0.00	(0; 0.33)	0.27	(0; 0.4)	0.73	(0.59; 0.86)	1.00	0.05	0.0004	0.3	(0.13; 0.44)	0.7	(0.56; 0.87)
Parahippocampal-R	0.19	-0.18	0.08	(0; 0.26)	0.00	(0; 0.13)	0.92	(0.74; 1)	0.37	1.00	0.670	0.08	(0; 0.26)	0.92	(0.74; 1)
Temporal pole-L	0.04	0.07	0.00	(0; 0.2)	0.05	(0; 0.19)	0.95	(0.8; 1)	1.00	0.67	0.756	0.05	(0; 0.2)	0.95	(0.8; 1)
Temporal pole-R	0.19	0.03	0.18	(0; 0.37)	0.00	(0; 0.21)	0.82	(0.63; 1)	0.23	1.00	0.184	0.18	(0; 0.37)	0.82	(0.63; 1)
Fusiform gyrus-L*	0.05	0.29	0.00	(0; 0.23)	0.14	(0; 0.27)	0.86	(0.73; 1)	1.00	0.16	0.146	0.12	(0; 0.27)	0.88	(0.73; 1)

Fusiform gyrus-R	0.15	0.02	0.13	(0; 0.28)	0.00	(0; 0.23)	0.87	(0.72; 1)	0.52	1.00	0.289	0.13	(0; 0.28)	0.87	(0.72; 1)
<i>Cingulate cortex</i>															
Rostral anterior division-L	-0.03	0.15	0.00	(0; 0.18)	0.05	(0; 0.19)	0.95	(0.81; 1)	1.00	0.50	0.756	0.03	(0; 0.19)	0.97	(0.81; 1)
Rostral anterior division-R	0.03	0.12	0.00	(0; 0.21)	0.07	(0; 0.2)	0.93	(0.79; 1)	1.00	0.53	0.644	0.06	(0; 0.21)	0.94	(0.79; 1)
Caudal anterior division-L	0.14	-0.04	0.10	(0; 0.28)	0.00	(0; 0.17)	0.90	(0.72; 1)	0.41	1.00	0.557	0.1	(0; 0.28)	0.9	(0.72; 1)
Caudal anterior division-R	0.35	0.04	0.35	(0.09; 0.53)	0.00	(0; 0.14)	0.65	(0.47; 0.85)	0.02	1.00	0.005	0.35	(0.15; 0.53)	0.65	(0.47; 0.85)
Rostral posterior division-L	0.27	0.03	0.22	(0; 0.37)	0.00	(0; 0.29)	0.78	(0.63; 0.93)	0.25	1.00	0.017	0.22	(0.07; 0.37)	0.78	(0.63; 0.93)
Rostral posterior division-R*	0.27	0.18	0.07	(0; 0.4)	0.18	(0; 0.36)	0.75	(0.6; 0.9)	0.79	0.47	0.003	0.27	(0.11; 0.41)	0.73	(0.59; 0.89)
Retrosplenial cortex-L	0.42	0.11	0.41	(0.1; 0.55)	0.00	(0; 0.23)	0.59	(0.45; 0.76)	0.02	1.00	<0.0001	0.41	(0.24; 0.55)	0.59	(0.45; 0.76)
Retrosplenial cortex-R	0.19	0.07	0.20	(0; 0.37)	0.00	(0; 0.24)	0.80	(0.63; 0.99)	0.29	1.00	0.105	0.2	(0.02; 0.37)	0.8	(0.63; 0.98)

NOTE: rMZ = phenotypic correlation among monozygotic twins, rDZ = phenotypic correlation among dizygotic twins, A= additive genetic variance, C = shared environmental variance, E = unique environmental variance, CI = confidence interval, L = left, R = right

¹ Testing whether setting the parameter a_{22} to zero significantly reduces model fit. A significant change in fit indicates that a model without residual genetic influences on the region provides a worse representation of the data, and provides a significance level for the heritability estimate.

² Testing whether setting parameter c_{22} to zero significantly reduces model fit. A significant change in fit indicates that a model without residual shared environmental influences on the region fits significantly worse.

³ Testing whether setting parameters a_{22} and c_{22} to zero significantly reduces model fit. A significant change in fit indicates that a

model without residual genetic and shared environmental influences on the region fits significantly worse.

*Regions in which the shared environmental effects are greater than 0.10, warranting caution in interpreting the A effects from an AE as purely genetic in origin.