Supplementary Materials for
"Microstructural asymmetry in the human cortex"

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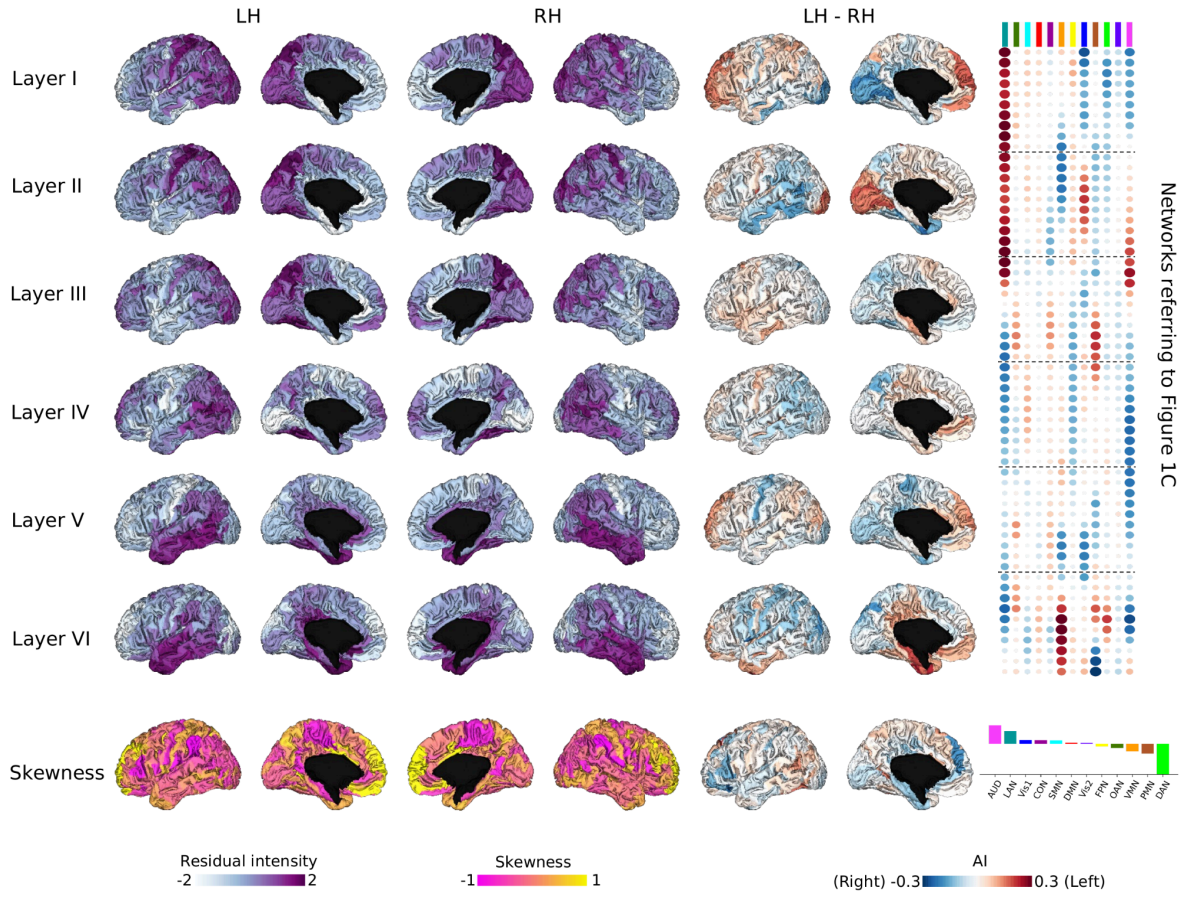
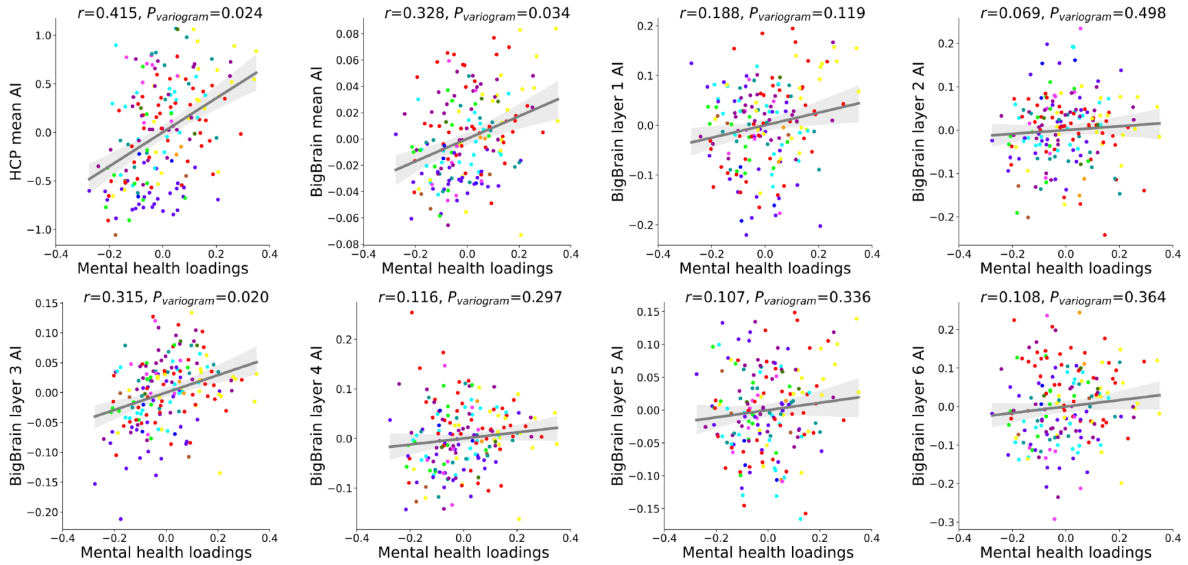
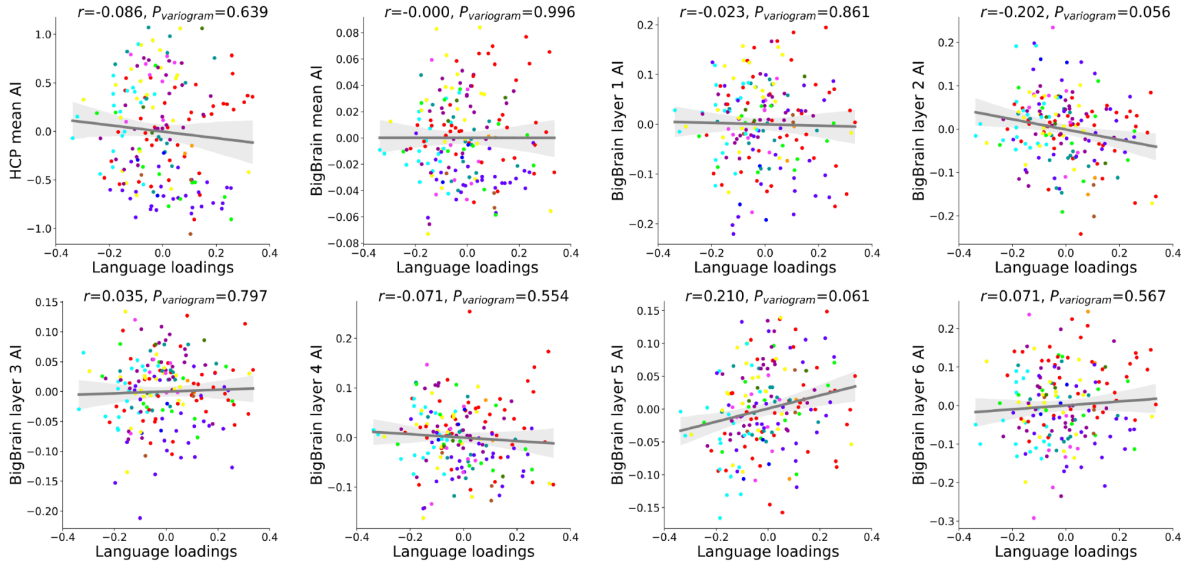
Supplementary Materials



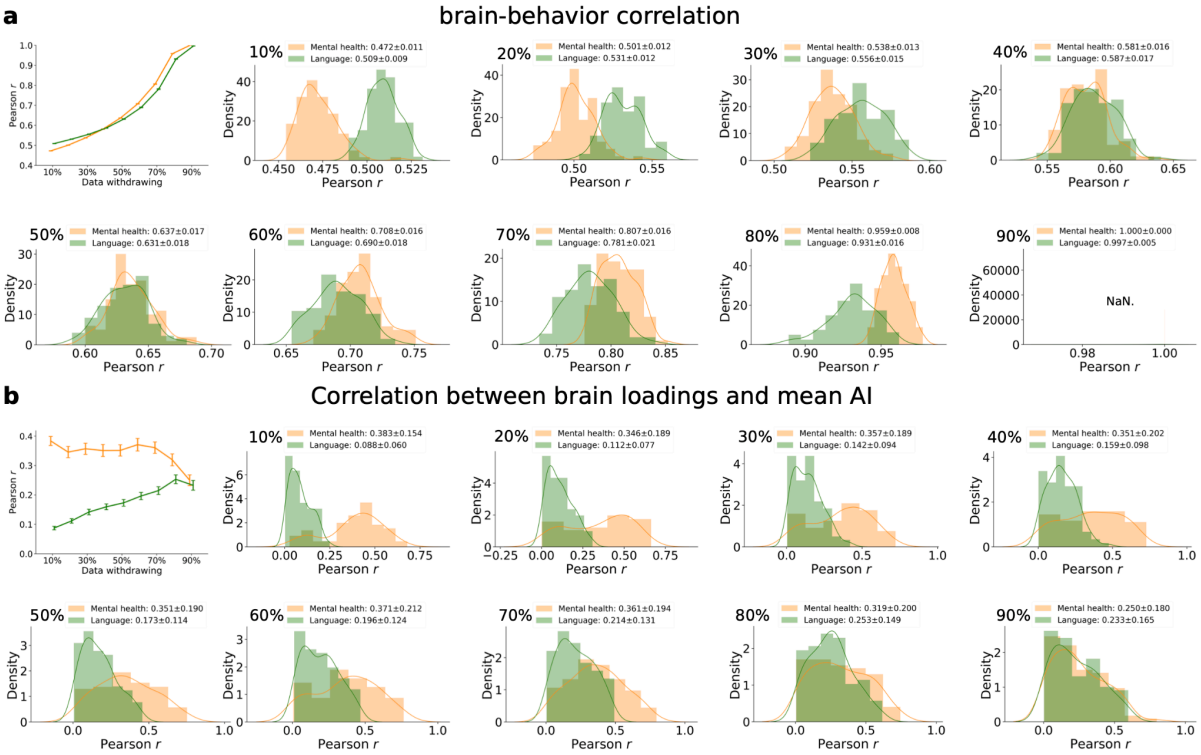
Supplementary Figure S1. Residual intensity values for each layer in BigBrain ($N = 1$).



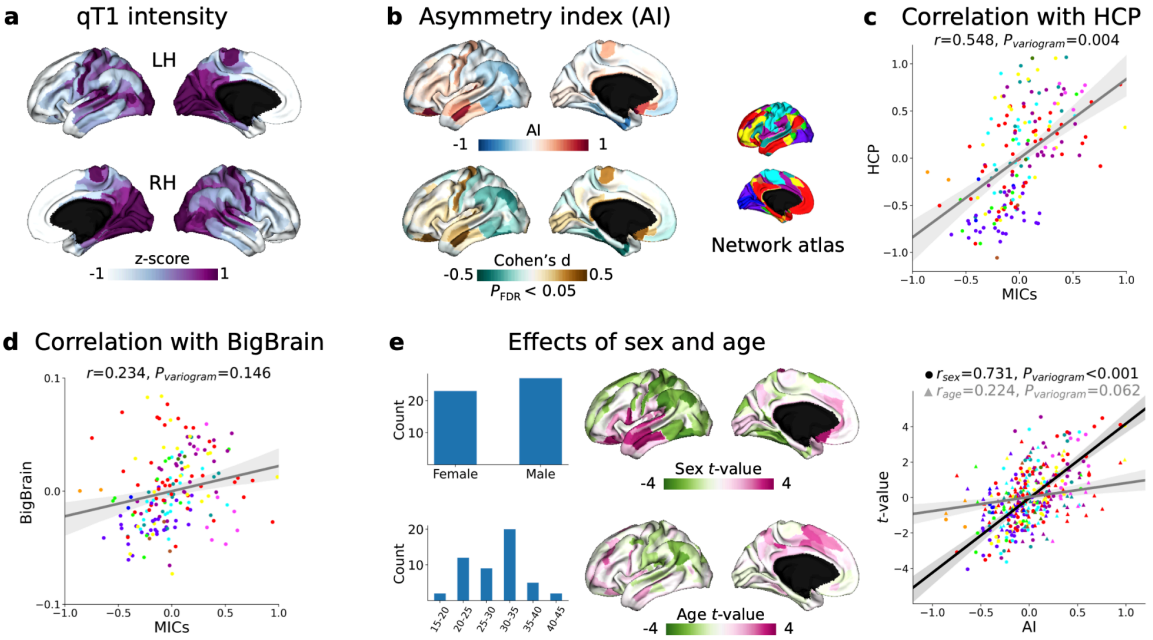
Supplementary Figure S2. Spatial correlation between CCA mental health brain loadings and AI maps (two-sided). Dots are 180 parcels.



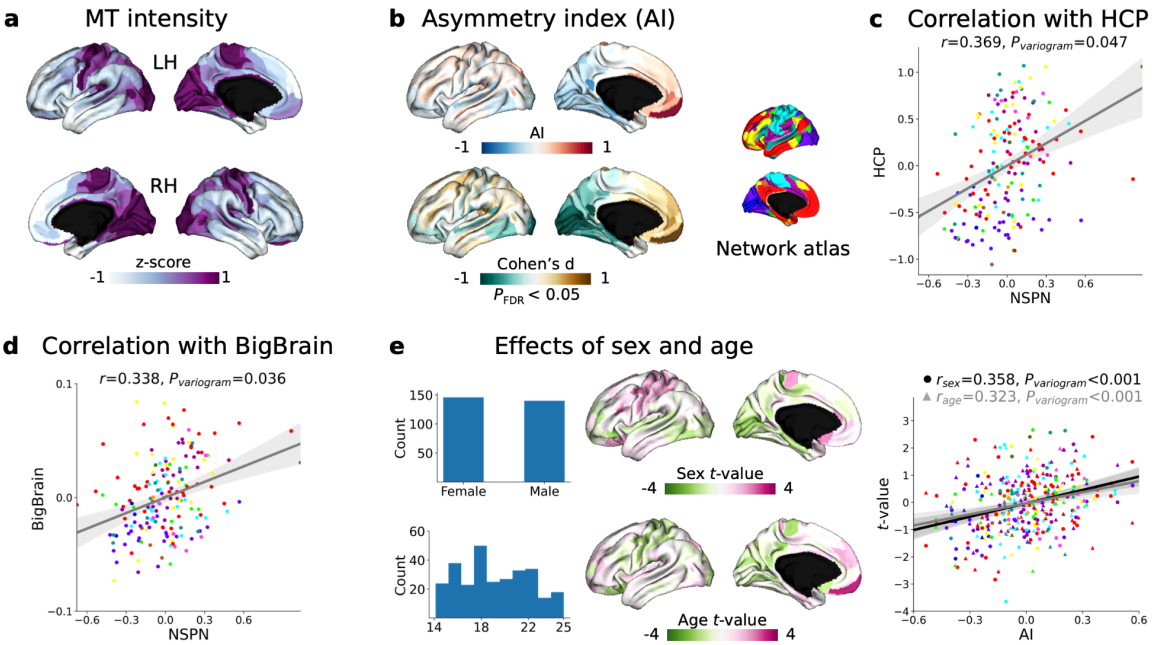
Supplementary Figure S3. Spatial correlation between CCA language brain loadings and AI maps (two-sided). Dots are 180 parcels.



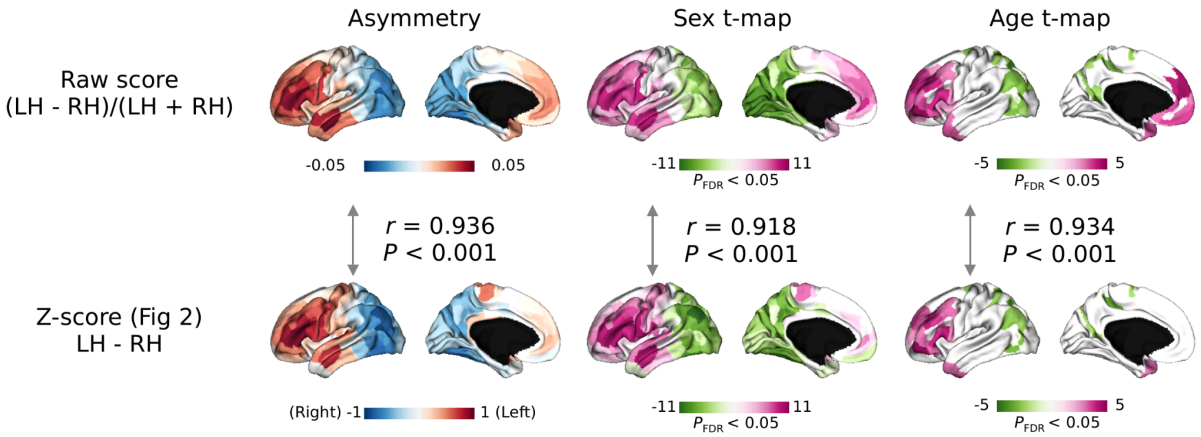
Supplementary Figure S4. Robustness test for CCA using resampling for 1000 times in HCP. **a**. Brain-Behavior correlation of the first latent dimension. **b**. Correlation between brain loadings and mean asymmetry index (AI) of HCP. Percentages are the data exclusion for resampling. Bars are standard errors.



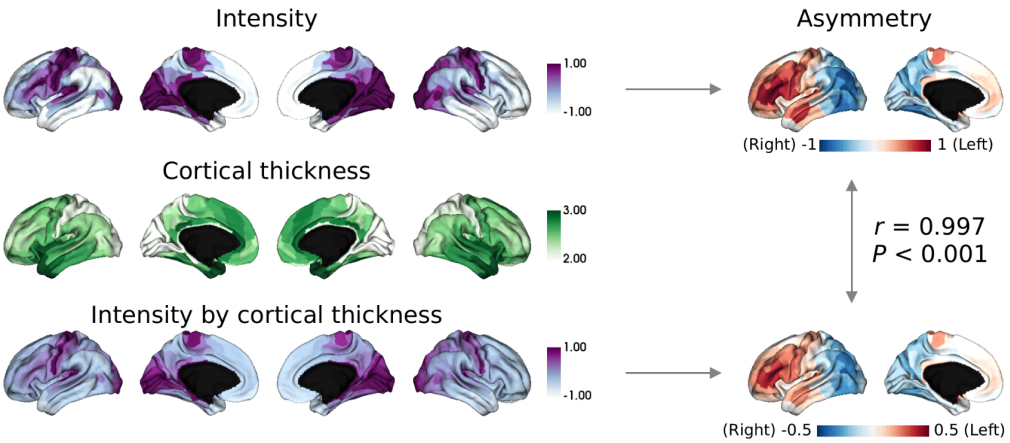
Supplementary Figure S5. Microstructural asymmetry in MICs (N = 50). **a**. Z-score of quantitative T1 (qT1) intensity. **b**. Mean and Cohen's d asymmetry maps of individual intensity. **c**. Mean asymmetry map correlation between MICs qT1 and HCP T1w/T2w. **d**. Mean asymmetry map correlation between MICs qT1 and BigBrain cytoarchitecture. **e**. Effects of sex and age on the asymmetry index and correlation between sex/age effect and mean asymmetry index maps. Dots in the scatter charts are 180 parcels and colored by network atlas.



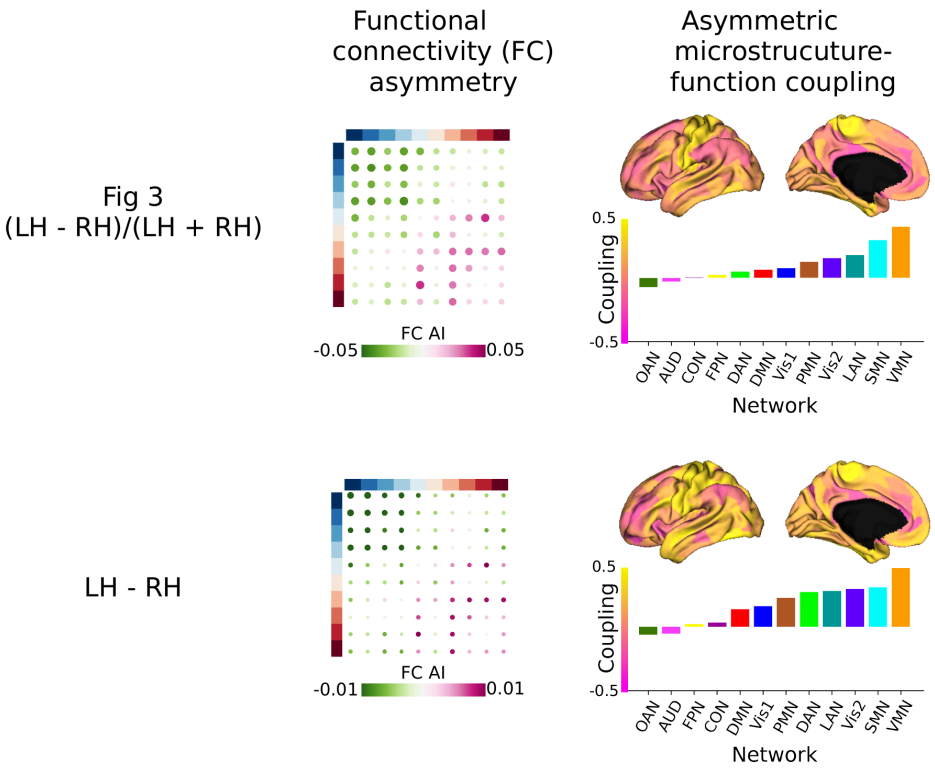
Supplementary Figure S6. Microstructural asymmetry in NSPN (N = 286). **a**. Z-score of magnetization transfer (MT) intensity. **b**. Mean and Cohen's d asymmetry maps of individual intensity. **c**. Mean asymmetry map correlation between NSPN MT and HCP T1w/T2w. **d**. Mean asymmetry map correlation between NSPN MT and BigBrain cytoarchitecture. **e**. Effects of sex and age on the asymmetry index and correlation between sex/age effect and mean asymmetry index maps. Dots in the scatter charts are 180 parcels and colored by network atlas.



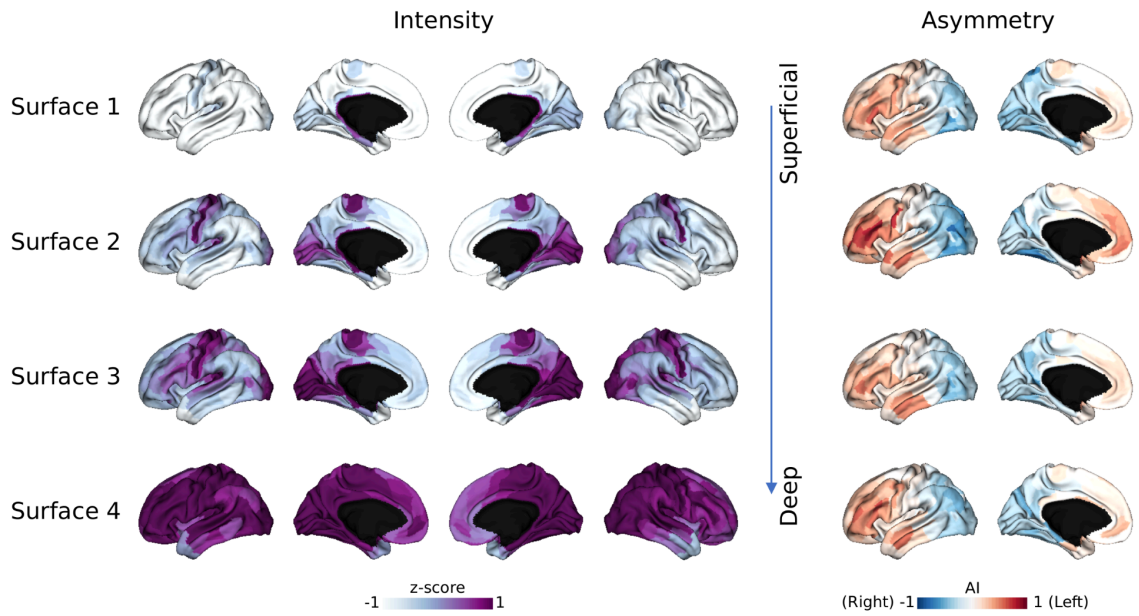
Supplementary Figure S7. Raw score versus z-score for asymmetry index ($N = 1101$).



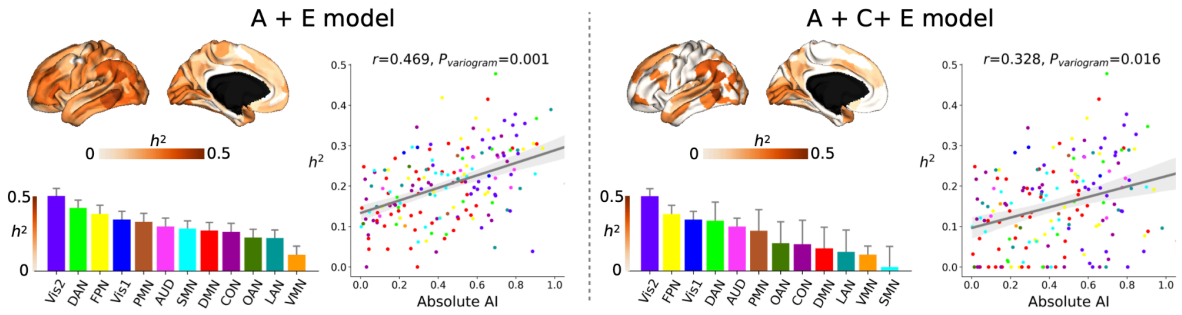
Supplementary Figure S8. Asymmetry of microstructural intensity by cortical thickness (*N* = 1101).



Supplementary Figure S9. Comparisons between original asymmetry (LH-RH)/(LH+RH) calculation and LH-RH for functional data ($N = 1004$).



Supplementary Figure S10. T1w/T2w asymmetry across four equivolumetric surfaces (*N* = 1101).



Supplementary Figure S11. T1w/T2w asymmetry heritability in HCP (N = 1101): A + E versus A + C + E model. Dots are 180 parcels.