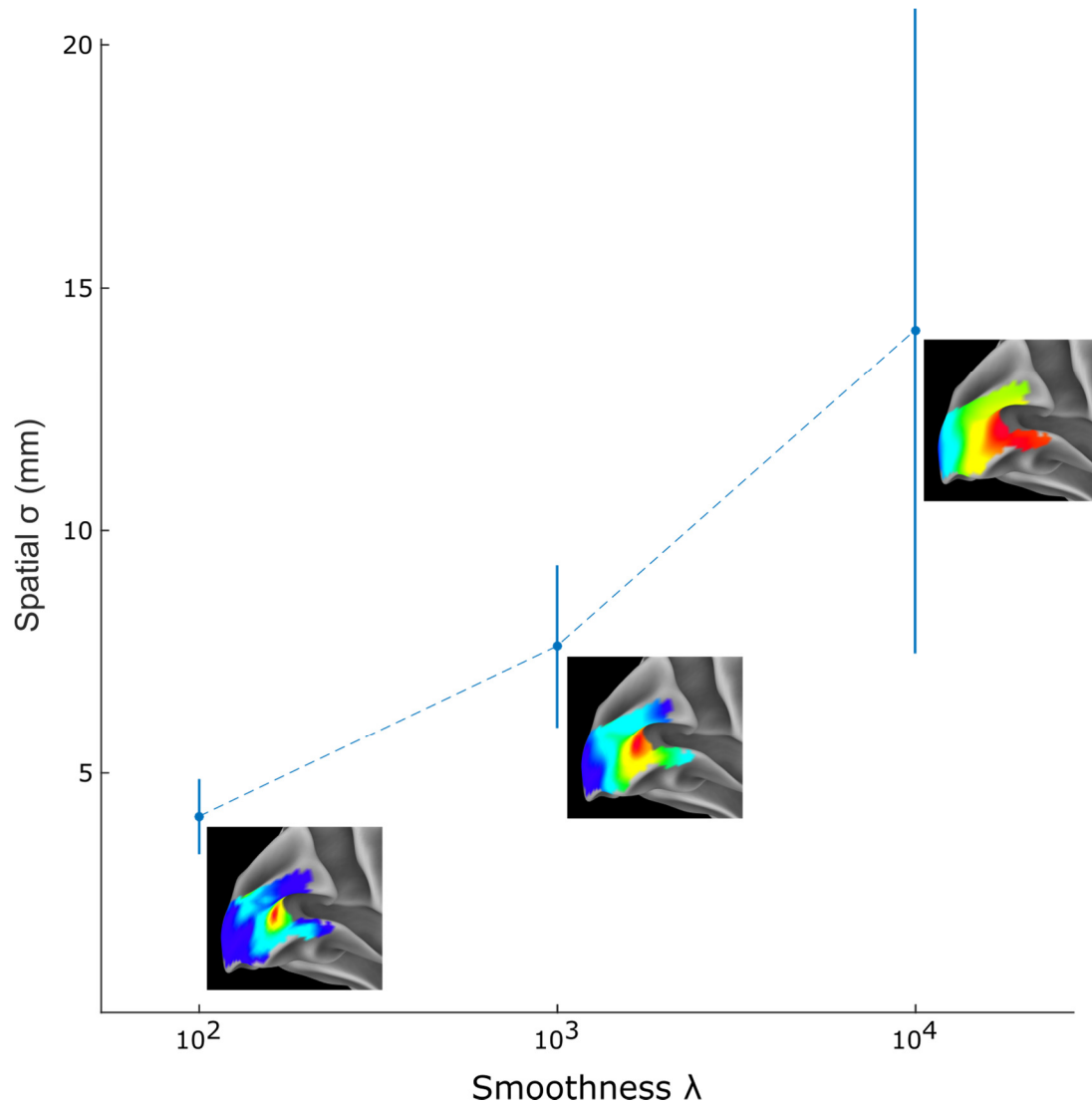


Supplementary Material

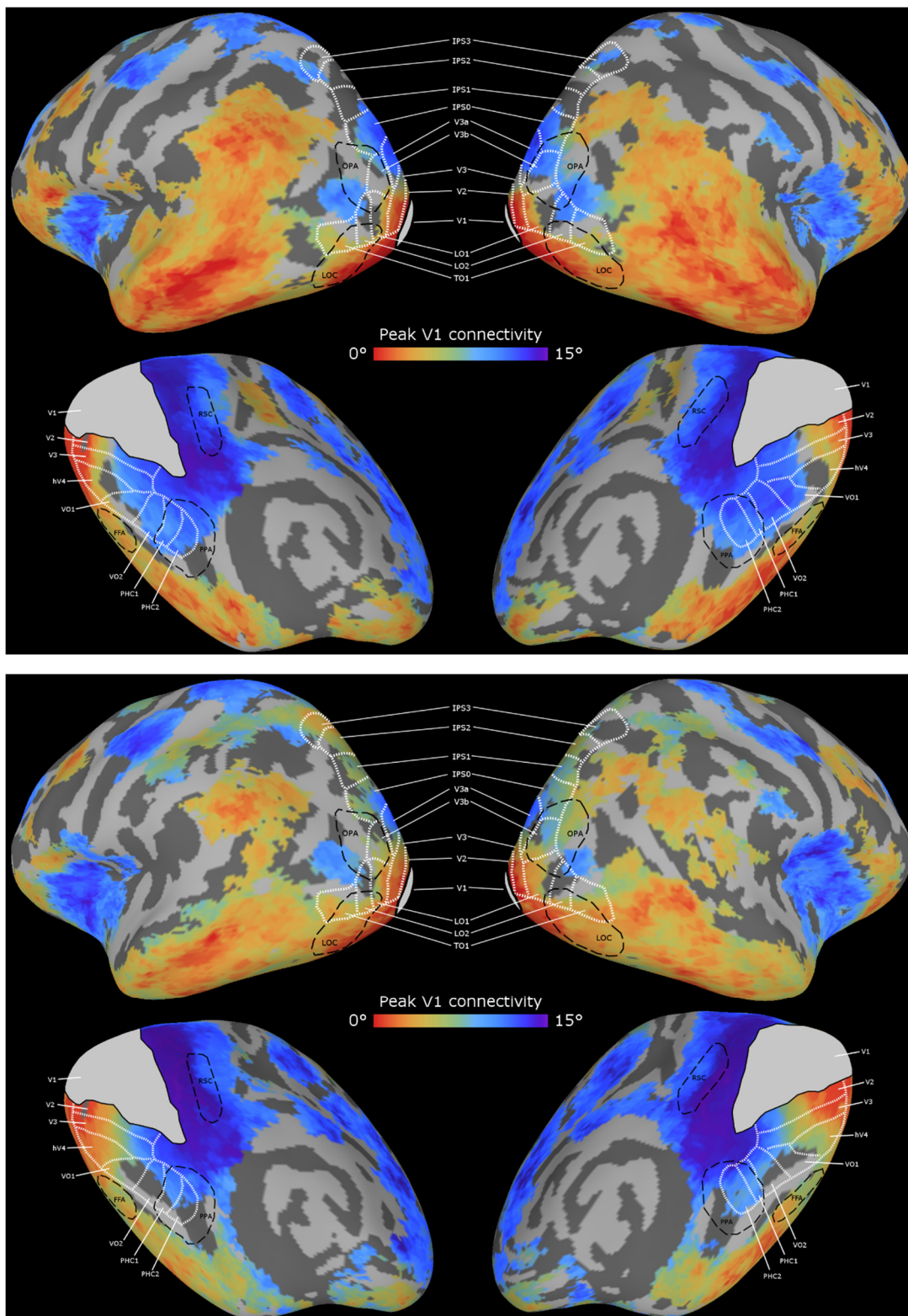
Pinpointing the peripheral bias in neural scene processing networks
during natural viewing

Baldassano, Fei-Fei, Beck

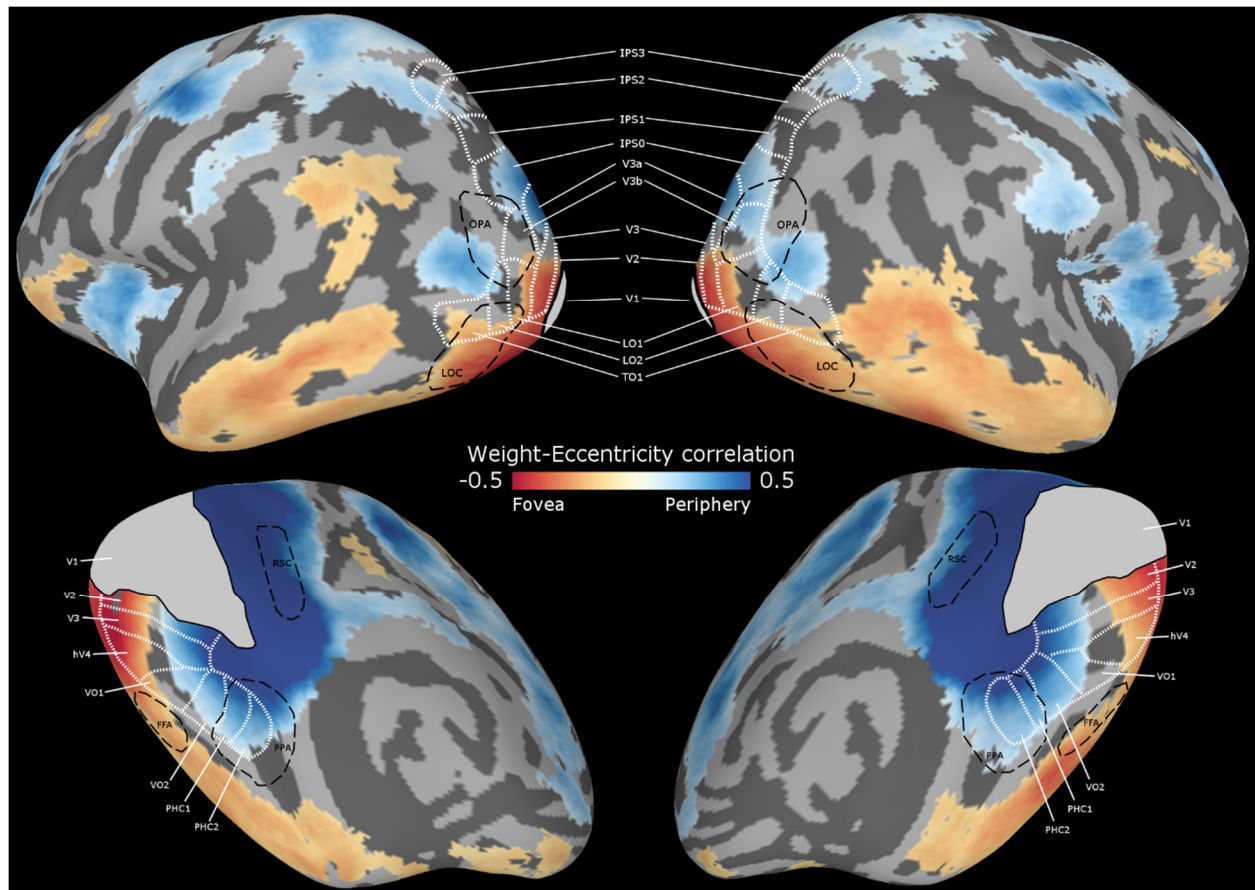


Supplementary Figure 1: **Relationship between smoothness parameter λ and smoothness in mm.** V1 connectivity weightmaps were learned for each visual ROI of each subject, with different settings of the smoothness parameter λ . The spatial smoothness was computed for each of these maps as the standard deviation in a Gaussian Random Field model (Worsley et al. 1992), and then averaged across subjects and seed ROIs. An example map for one subject's connectivity to OPA is shown next to each choice of λ . We observe that λ sets a rough spatial scale at which the connectivity map will vary. Since we are primarily interested in gradients that span most of retinotopically-localized V1, we select $\lambda = 1000$ for the results in the main paper, but our results are very similar across choices of λ (see Supplementary Figure 3). Error bars indicate standard deviation across subjects.

Worsley, K.J., Evans, A.C., Marrett, S., Neelin, P., 1992. A Three-Dimensional Statistical Analysis for CBF Activation Studies in Human Brain. *J Cereb Blood Flow Metab* 12, 900-918.



Supplementary Figure 2: **Robustness of results to smoothness parameter λ .** Increasing the smoothness parameter by order of magnitude ($\lambda = 10^4$, top) or decreasing by an order of magnitude ($\lambda = 100$, bottom) leads to little change in the results reported in Fig. 3 ($\lambda = 10^3$).



Supplementary Figure 3: **Linear correlation of weights with eccentricity.** A searchlight was performed to calculate the correlation between weight and eccentricity (as in Fig. 2, middle), with colored vertices showing a consistently positive (peripheral) or negative (foveal) correlation ($q < 0.05$, minimum cluster size 100mm^2). This shows results largely consistent with Fig. 3, indicating foveal connectivity throughout ventral and lateral occipitotemporal cortex and in dorolateral prefrontal cortex, and peripheral connectivity in medial parietal and frontal regions, superior occipital and parietal lobes, and the insula.