

**Supplemental Figure 1.** *Checkerboard localizer.* (a) Axial slice showing the activations of the left (blue) and right (red) LGN and visual cortex (thresholded at p < .01) evoked by a flickering checkerboard stimulus presented in alternation to the right or left hemifield while subjects maintained fixation at a central fixation point. The LGN activation is also shown in a coronal plane. Checkerboard stimuli encompassed the same portion of the visual field as the grating stimuli used in the rivalry and physical alternation experiments except for a small region along the vertical meridian that was omitted in the localizer. (b) Time series of fMRI signals averaged across all activated voxels of the left LGN (blue) and the right LGN (red). The alternating checkerboard pattern was first presented to the right visual hemifield, thereby activating the left LGN first.