



Supplemental Figure 1. This figure addresses the third factor from the PCA analysis of behavioral ratings (unipolar emotional valence), which was not included in the social communicative model in the main text. (A) *Unipolar valence factor DSM*. The DSM shows the quantitative relationship between individual image pairs for the factor representing a unipolar valence (see Figure 1 for correspondences between letter labels and the images). The top four ranking and bottom four ranking images are shown beneath the DSM. Lines show the Pearson correlations the bipolar valence factor DSM and the DSMs for the other factors in the communicative model. (B) MEG decoding and the social communicativeness model with unipolar valence factor included. Plotted are beta weights for three social factors and the visual factor from the regression analysis on time varying MEG decoding performance. The y-axis is the time varying factor beta weights. Note the scale for the visual factor is shown on the left-hand side of the plot. The scale for the social-communicative factors is on the right. The solid line is the average beta weight across subjects. The shaded region is 1 S.E.M. Color coded asterisks indicate a significant correlation, evaluated using a Wilcoxon signed rank test with a FDR threshold of 0.05. Decoding of the unipolar valence factor was never above chance at FDR < 0.05.