

Supporting Information

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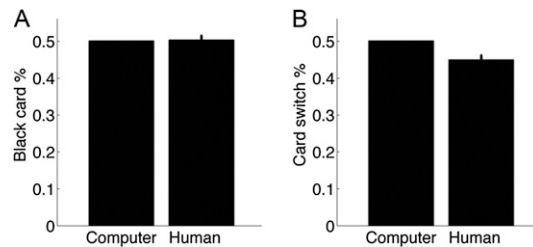


Fig. S1. Behavioral data in the functional MRI study. (A) The percentage of choosing black card by the computer and human subjects. (B) The percentage of switching from one card to another by the computer and human subjects. Error bars represent SE.

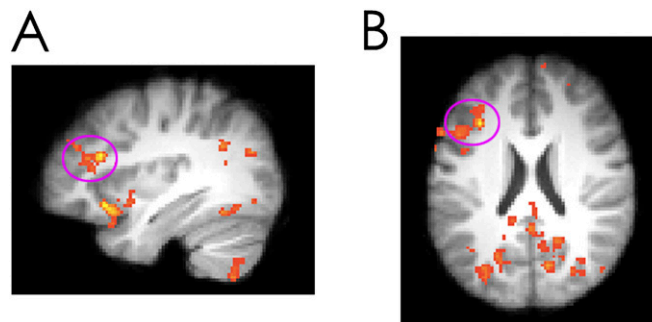


Fig. S2. Left lateral prefrontal cortex shows three-way interaction, which is overlaid on the (A) sagittal and axial slices of the group mean structural image. All activations were thresholded by using cluster detection statistics, with a height threshold of $z > 2.3$ and a cluster probability of $P < 0.05$, corrected for whole-brain multiple comparisons.

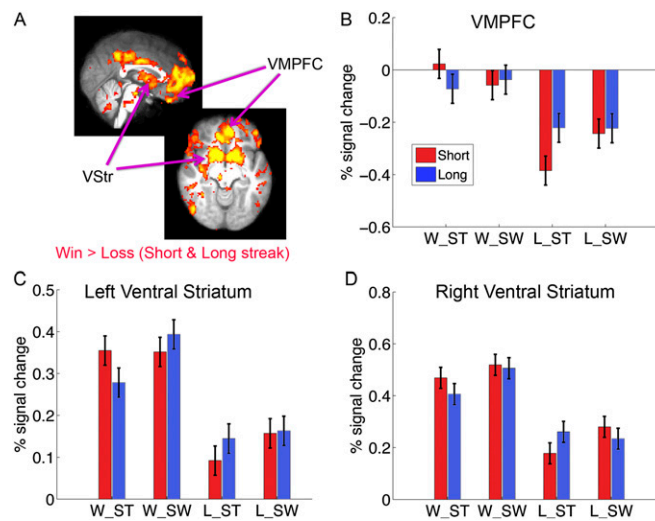


Fig. S3. Regions that showed stronger activations to gains than to losses. (A) Stronger activation to gains than to losses was found in a wide neural network, including the ventromedial prefrontal cortex (VMPFC) and bilateral ventral striatum (vStr). The activations, threshold at $z > 2.3$ (whole-brain corrected) are rendered onto the sagittal and axial slices of the group-average anatomical map. Plots of percent signal changes in the VMPFC (B), left vStr (C), and right vStr (D) regions show significant effects of current outcome. Error bars represent within-subject SE. For VMPFC, the reward effect (i.e., gains > losses) was stronger under short streaks than under long streaks [$F(1,17) = 7.08$, $P = .017$]. In the left and right vStr, there were (marginally) stronger activations when subjects subsequently switched their choice in the next trial than when they did not [left, $F(1,17) = 3.76$, $P = 0.069$; right, $F(1,17) = 10.42$, $P = 0.005$]. No other main effect or interaction was significant ($P > 0.14$).

